BLADEN LIBRARY SCARBOROUGH
3 1761 02928 9170

MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY.

MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY.

EDITED BY

PROFESSOR G. F. STOUT,

WITH THE CO-OPERATION OF PROFESSOR E. B. TITCHENER, AMERICAN EDITORIAL REPRESENTATIVE, AND OF PROFESSOR WARD, PROFESSOR PRINGLE-PATTISON, DAVID MORRISON, M.A., AND OTHER MEMBERS OF AN ADVISORY COMMITTEE.

NEW SERIES.

VOL. XXI.—1912.

Reprinted by permission of
THOMAS NELSON AND SONS LTD. EDINBURGH
KRAUS REPRINT LTD.
Vaduz
1964

Printed in Germany
Lessing-Druckerei Wiesbaden

SCARBOROUGH
COLLEGE
LIBRARY

CONTENTS OF VOLUME XXI.

(*NEW SERIES.*)

ARTICLES.

	PAGE
ALEXANDER, S.—The Method of Metaphysics and the Categories	1
„ „ On Relations; and in Particular the Cognitive Relation	305
CARLILE, W. W.—Perception and Intersubjective Intercourse	508
CARR, H. W.—Shadworth Hollway Hodgson	473
FAWCETT, E. D.—"Matter and Memory"	201
HOCKING, W. E.—The Meaning of Mysticism as Seen through Its Psychology	38
LEONE, H.—The Vedantic Absolute	62
LEWIS, C. J.—Implication and the Algebra of Logic	522
LLOYD, A. H.—The Reign of Science in the History of a Race	486
MACINTOSH, D. C.—Representational Pragmatism	167
MACIVER, R. M.—The Ethical Significance of the Idea Theory (II.)	182
MACKENZIE, J. S.—Notes on the Problem of Time	329
PRICHARD, H. A.—Does Moral Philosophy Rest on a Mistake?	21
SCHILLER, F. C. S.—Relevance	153
SHARP, F. C.—The Ethical System of Richard Cumberland, and Its Place in the History of British Ethics	371
SHELTON, H. S.—The Limits of Deductive Reasoning	79
TAYLOR, A. E.—The Analysis of 'ΕΠΙΣΤΗΜΗ in Plato's Seventh Epistle	347

DISCUSSIONS.

BERKELEY, H.—The Kernel of Pragmatism	84
FAWCETT, E. D.—Truth's "Original Object"	89
HICKS, G. D.—The Nature of Sense-Data	399
HICKS, L. E.—Euler's Circles and Adjacent Space	410
MOORE, A. W.—Thought and Its Function	233
SCHILLER, F. C. S.—The 'Working' of 'Truths'	532
SHELTON, H. S.—Dr. Alexander and the *A Priori*	238

CRITICAL NOTICES.

ALIOTTA, A.—*La Reazione Idealistica Contro la Scienza* (A. E. Taylor)	536
BERTHELOT, RENÉ.—*Un Romantisme Utilitaire: Étude sur le Mouvement Pragmatiste* (F. C. S. Schiller)	250
BOSANQUET, B.—*The Principle of Individuality and Value: The Gifford Lectures (Edinburgh) for* 1911 (J. E. McTaggart)	416
DELACROIX, HENRI.—*Études d'Histoire et de Psychologie du Mysticisme. Le Grands Mystiques Chrétiens* (A. R. Whately)	112
JAMES, W.—*Essays in Radical Empiricism* (B. Russell)	571
JONES, E. E. C.—*A New Law of Thought and Its Logical Bearings* (F. C. S. Schiller)	246
MCDOUGALL, W.—*Body and Mind: A History and a Defence of Animism* (J. S. Mackenzie)	104

PAGE

MEREDITH, J. C.—*Kant's Critique of Aesthetic Judgment* (J. M. O'Sullivan) - - - - - - - - - - - - - 546
MÜLLER, A.—*Das Problem des Absoluten Raumes und Seine Beziehung zum Allgemeinen Raumproblem* (P. E. B. Jourdain) - - - 257
RICHARDS, H.—*Platonica* (A. E. Taylor) - - - - - - 241
RUSSELL, B.—*The Problems of Philosophy* (B. Bosanquet) - - - 556
STIRLING, A. H.—*James Hutchinson Stirling: His Life and Work* (J. B. B.) - - - - - - - - - - - - - - 564
TAYLOR, A. E.—*Varia Socratica*, First Series (H. W. Blunt) - - 438
URWICK, E. J.—*A Philosophy of Social Progress* (J. S. Mackenzie) - 553
VAIHINGER, H.—*Die Philosophie des Ob. System der Theoretischen Praktischen und Religiösen Fiktionen der Menschheit auf Grund eines Idealistischen Positivismus, mit einem Anhang über Kant und Nietzsche* (F. C. S. Schiller) - - - - - - - - 93
WARD, J.—*The Realm of Ends, or Pluralism and Theism: The Gifford Lectures (St. Andrews), delivered* 1907-1910 (A. E. Taylor) 427
WELLS DENTON, W.—*John Wesley Young: Lectures on Fundamental Concepts of Algebra and Geometry* (P. E. B. Jourdain) - - - 445
WELTON, J.—*The Psychology of Education* (W. H. Winch) - - 253

NEW BOOKS.

ADAM, JAMES.—*The Vitality of Platonism and Other Essays* (A. E. Taylor) - - - - - - - - - - - - - - - 117
ADAMS, J.—*Exposition and Illustration in Teaching* (J. Edgar) - - 587
ADICKES, E. (edited by).—*Kant's Gesammelte Schriften* (P. E. B. Jourdain) - - - - - - - - - - - - - - - 281
ADICKES, E.—*Kant's Ansichten über Geschichte und Bau der Erde* (H. W. Blunt) - - - - - - - - - - - - 281
Annales de L'Institut Superieur de Philosophie (A. E. Taylor) - - 593
Aristotelian Society, Proceedings of, 1910-1911 (D. Broad) - - - - 260
BARRETT, E. B.—*Motive-Force and Motivation-Tracks: A Research in Will Psychology* (W. McD.) - - - - - - - - - 270
BAUMANN, J.—*Der Wissensbegriff* (C. C. J. Webb) - - - - - 127
BENETT, W.—*Justice and Happiness* - - - - - - - 119
BINET, A.—*L'Année Psychologique* (H. J. Watt) - - - - - 275
BLIGH, S. M.—*The Desire for Qualities* (J. Laird) - - - - - 274
BONUCCI, A.—*Verità e Realtà* (W. L. Lorimer) - - - - - 128
BOODIN, J. E.—*Truth and Reality: an Introduction to the Theory of Knowledge* (C. D. Broad) - - - - - - - - - 449
BROWN, W.—*The Essentials of Mental Measurement* (C. W. V.) - - 275
BURY, J. S.—*Diseases of the Nervous System* (W. L. M.) - - - 591
BUSCH, K. A.—*William James als Religionsphilosoph* (F. C. S. S.) - 283
BUSSE, A.—*Aristoteles Über die Seele* (W. D. Ross) - - - - 595
CASSIRER, E.—*Das Erkenntnisproblem in der Philosophie und Wissenschaft der Neueren Zeit* (H. W. B.) - - - - - 282
CASSIRER, E.—*Das Erkenntnisproblem in der Philosophie und Wissenschaft der Neueren Zeit* (H. W. Blunt) - - - - - 459
CLAPARÈDE, E. (published by).—*VI^me Congrès International de Psychologie* (Geneva, Libraire Kündig, 1910) (H. J. Watt) - - - 122
COLLE, G.—*Aristote: La Métaphysique, Livre I^er*, etc. (A. E. Taylor) 592
COOKE, H. P.—*Maurice the Philosopher* (a Dialogue); *or Happiness, Love and the Good* (A. S.) - - - - - - - - - - 451
COURNOT, A.—*Traité de l'Enchaînement des Idées Fondamentales dans les Sciences et dans l'Histoire* (A. E. T.) - - - - - - - 594
CUSHMAN, H. E.—*A Beginner's History of Philosophy* (C. A. Ruckmich) - - - - - - - - - - - - - - - 458
DIETZGEN, E.—*Josef Dietzgens Sämmtliche Schriften* (S. J. Chapman) 598

PAGE

ELLIOT, H. S. R.—*Modern Science and the Illusions of Prof. Bergson* (H. Wildon Carr) - - - - - - - - - - - - 599
ELLIS, H.—*The World of Dreams* (W. McD.) - - - - - - 271
„ „ *Studies in the Psychology of Sex.* Vol. VI.: *Sex in Relation to Society* (W. L. M.) - - - - - - - - - - 267
EUCKEN, R.—*Life's Basis and Life's Ideal* (H. R. Mackintosh) - - - 576
FITE, W.—*Individualism. Four Lectures on the Significance of Consciousness for Social Relations* (A. A. Bowman) - - - - - 269
FLOURNOY, T.—*La Philosophie de William James* (F. C. S. Schiller) - 279
HUIZINGA, A.—*Authority: The Function of Authority in Life and Its Relation to Legalism in Ethics and Religion* (W. L. Lorimer) - 581
GOURD, J. J.—*Philosophie de la Religion* (G. Galloway) - - - - 277
GRUENDER, H. S. J.—*Psychology without a Soul: a Criticism* (J. Laird) - - - - - - - - - - - - - - - - 590
HAMILTON, LORD E.—*Involution* (A. E. Taylor) - - - - - - 588
HORNE, H. H.—*Free Will and Human Responsibility* (J. Laird) - 457
JAMES, W.—*Memories and Studies* (H. V. Knox) - - - - - 453
KEYSERLING, H. G.—*Prolegomena zur Naturphilosophie* (A. A. Bowman) - - - - - - - - - - - - - - - - 124
KRAFT, V.—*Weltbegriff und Erkenntnisbegriff* (J. Laird) - - - 596
KÜHTMANN, A.—*Zur Geschicht des Terminismus* (A. E. Taylor) - - 279
LAGRÉSILLE, H.—*Le Fonctionnisme Universel. Monde Moral: L'ordre des fins et des Progrès* (J. Laird) - - - - - - - - - 458
LINDSAY, J.—*The Psychology of Belief* (G. G.) - - - - - - 273
MACCUNN, J.—*Liverpool Addresses on Ethics of Social Work* (H. Bosanquet) - - - - - - - - - - - - - - - - 587
MAJEWSKI, E. DE—*La Théorie de l'Homme*, etc. (M.) - - - - - 593
MICHAËLIS C. (edited by).—*Philosophische Bibliothek: Kirchner's Wörterbuch der Philosophischen Grundbegriffe* (H. W. Blunt) - 126
MITRA, A. C.—*The Elements of Morals* (J. Laird) - - - - - 586
MYERS, C. S.—*An Introduction to Experimental Psychology* (C. W. Valentine) - - - - - - - - - - - - - - - 121
PETZOLDT, J.—*Das Weltproblem vom Standpunkte des Relativistischen Positivismus*, etc. (A. Wolf) - - - - - - - - - - 597
PIÉRON, H.—(See TOULOUSE).
RAVÀ, A.—*Il Diritto Come Norma Tecnica* (A. E. Taylor) - - - 598
SCHUMANN, F. (edited by).—*Bericht über den IV. Kongress für Experimentelle Psychologie in Innsbruck* (H. J. W.) - - - - - 127
SERBATI, A. R.—*Theodicy: Essays on Divine Providence* (James Lindsay) - - - - - - - - - - - - - - - - - 583
SHAW, C. G.—*The Value and Dignity of Human Life* - - - - 120
SHEARMAN, A. T.—*The Scope of Formal Logic* (A. E. Taylor) - - 264
SQUILLACE, F.—*Die Soziologischen Theorien* (M.) - - - - - 457
STOCK, G.—*English Thought for English Thinkers* (J. Laird) - - 584
THORNDIKE, E. L.—*Animal Intelligence: Experimental Studies* (P. E. Winter) - - - - - - - - - - - - - - - 120
TOULOUSE, E. (et H. PIÉRON).—*Technique de Psychologie Expérimentale* (Anonymous) - - - - - - - - - - - - - - 123
VIDARI, G.—*Manuali Hoepli. Elementi di Etica* (A. E. Taylor) - 284
VILLA, G.—*La Psicologia Contemporanea* (C. A. F. R. Davids) - - 283
TUCKETT, J. L.—*The Evidence for the Supernatural, a Critical Study Made with "Uncommon Sense"* (F. C. S. Schiller) - - - 271
WELBY, V.—*Significs and Language: the Articulate Form of Our Expressive and Interpretive Resources* (C. D. Broad) - - - 455
WHEELER, C. K.—*Critique of Pure Kant*, etc. - - - - - - 591
WHITTAKER, T.—*Priests, Philosophers and Prophets* (F. C. Conybeare) 456
WILDER, A.—*Theurgia, or the Egyptian Mysteries, by Iamblichus* (A. E. Taylor) - - - - - - - - - - - - - - - 272
WITHERSPOON, J.—*Early American Philosophers. Lectures on Moral Philosophy* (J. Laird) - - - - - - - - - - - 589

PHILOSOPHICAL PERIODICALS.

PAGE

American Journal of Psychology (vol. xxii., No. 3—vol. xxiii., No. 1) - - - - - - - - - - 292, 604
Archiv für die gesamte Psychologie (Bd. xvii., Heft 2—Bd. xxii., Heft 2 und 3) - - - - - - - 139, 298, 615
Archives de Psychologie (Tome x., No. 4 — Tome xi., No. 3) - - - - - - - - - - - 137, 612
British Journal of Psychology (vol. iv., Part 1—vol. iv., Parts 3 and 4) - - - - - - - - - - 135, 606
Cambridge Magazine (11th May, 1912) - - - - - 605
International Journal of Ethics (vol. xxii., No. 2—vol. xxii., No. 3) - - - - - - - - - - 464
Journal of Philosophy, Psychology, etc. (vol. viii., No. 10—vol. ix., No. 16) - - - - - - - - 294, 465, 605
Philosophical Review (vol. xx., No. 3—vol. xxi., No. 1) - 134, 289, 602
Psychological Review (vol. xviii., No. 1—vol. xix., No. 1) 135, 290, 463, 603
Revue de Philosophie (1er Mars, 1911—1er Avril, 1912) - 138, 610
Rivista di Filosofia (Anno iii., April, 1911—Anno iv., Fasc. 2) - - - - - - - - - - - - 143, 300, 622
"*Scientia*," *Rivista di Scienza* (vol. ix., 1911—vol. xi., 1912, No. xxi.) - - - - - - - - - - 300, 469, 621
Zeitschrift für Philosophie und Philosophische Kritik (Bd. cxlii., Heft 1—Bd. cxlvi., Heft 1) - - - 143, 622
Zeitschrift für Psychologie (Bd. lvii., Heft 5—Bd. lx., Heft 1 und 2) - - - - - - - - - - 139, 296, 467, 620

NOTES.

Benn, A. W.—Aristotle and the Moon's Axial Rotation - - - 152
Bosanquet, B.—Letters by - - - - - - - - - - 472
Bradley, F. H.—Reply to a Criticism - - - - - - - 148
Corrigenda - - - - - - - - - - - - - - 624
Drummond, M.—Real Kinds and General Laws - - - - - 150
Haldane, E. S., and Ross, G. R. T.—Notes on a Criticism - - - 145
Heidel, W. A.—Note on the Origin of the Atomic Theory - - - 303
Jourdain, P. E. B.—Reply to J. J. Maxwell's Note - - - - 471
" " Nominalism in Mathematics - - - - 623
Maxwell, J. J.—Note on a Review of Prof. Natorp's *Die Logischen Grundlagen*, etc. - - - - - - - - - - - 302
Mind Association, Full List of Officers and Members - - - - 153
" " Annual General Meeting, etc. - - - - 303
Obituary (Professor Alfred Fouillée) - - - - - - - - 624
Stebbing, L. S.—Pragmatism and the Dictum, "All Truths Work" 471
Taylor, A. E.—Reply to Note by Miss Haldane and G. R. T. Ross - 304

MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY

I.—THE METHOD OF METAPHYSICS; AND THE CATEGORIES.

By S. Alexander.

Philosophy consists for the most part, like other sciences, in applying a single principle of a simple character to a variety of different topics, or rather in attempting to test or verify the possibility of applying it to these topics. It takes for its beginning some fundamental fact which as Berkeley said long ago of the principle which he discovered, a man has only to open his eyes to see. The reasonings by which the philosopher sometimes supports the truth of the fundamental fact are, not so much arguments for what cannot in the nature of the case be proved, as contrivances for putting his readers into the right position for seeing. And the verification of it by applications or deductions is chiefly useful in so far as they are a means of persuading the reader of the initial principle from which they are deduced. The topic which I propose to treat as an application of a certain fundamental truth or fact or principle is the method of philosophy itself; and as I believe that method to be dictated by a simple fundamental fact of experience, I begin with the statement of this, even at the risk of being tedious to those who have read it already,[1] of whom I am safe in assuming that the number is small.

The fundamental fact of experience is that any mental experience whatsoever declares of itself that there are two things compresent, one the act by which we apprehend and

[1] See *Proceedings of Aristotelian Society*, N.S., vols. ix., x., xi. (1908-1911).

the other the object which is apprehended. The word thing is used here in the loosest possible way to stand for something or other ; whatever form it may assume, *sensum*, percept, image, thought, any *cognitum*. What is certain is that he who has any experience experiences two things. One is the object he is concerned with, and that is not his mind ; the other is his act of experiencing, an event which since it is experienced in the course of his life not by itself but in continuity with other such events, he comes to know as an act of that continuous tissue of mental events which is called his mind. It may be added that similarly the object through its continuity with certain other objects comes to be known as a partial appearance of what is commonly called a *thing*. You may take then perception, or images, or thoughts, judgments. In each case you find two things together, one a mind acting in different ways according to the nature of the object ; the other an object which is not a mind, some piece of the world which in virtue of this particular mental act is revealed to the mind as percept or image or proposition or what not. The object may be illusory, but it is external. It may be imaged, but image as it is, the image is in the same sense external and independent of the mind as the percept which it represents. If I am in the mental act of imagining a table, the same table as was before me in perception is now present along with me in a somewhat different form. When I am judging, I am together with some real, *i.e.* non-mental connexion of things, some fact of the world. Strip your mind of the prepossession that what you apprehend must be something dependent on your mind ; strip it more particularly of the prepossession that images and judgments are something peculiarly mental ; and you see that to have an experience is the compresence of the two things named. What compresence means, what the togetherness of things ultimately implies as to the nature of the universe, that is something to be inquired into afterwards, though it does not fall within the limits of this paper. At present all that it means is the mere fact of togetherness. It is not the *additional* consciousness of togetherness. In certain reflective conditions I may be conscious also of togetherness as such. But when I merely perceive the table, I am there and the table is there, but I am not aware that I am there *together with* the table, or *and* the table, as if I were aware *of* the table and *of* ' and,' or *of* its togetherness with me. What I am aware *of* is only the table. The togetherness or compresence of the perceiving and the table is the perception *of* the table. I experience the togetherness

only in the sense that I have this perception.[1] Thus the table and I are together in precisely the same sense as the table and the chair are together. A looker on who could see me and the table in the same way as I see the table and the chair would say that the table and I or the table and the chair are together in the same sense. Instead of the chair there happens to be I, who am a mass of experiencings. My perception of the table is thus the fact that there is a thing which can perceive and a thing which so provokes it as to perceive in the manner appropriate for perceiving a table. Any experience whatever means therefore compresence[2] within the world of the experiencer and the experienced in precisely the same way as two experienced things are together for the same experiencer. For me looking on, there is a table; there is also a chair. For me engaged in perceiving the table alone, there is myself; there is also the table. The recognition of this is of the utmost importance for our advance.

2. *Enjoyment and Contemplation.*—The two things experienced are so differently experienced that it is useful to distinguish them by technical names. I propose to say that the mind is enjoyed and its objects contemplated. Or we might say that the mind is lived through and objects are cognised. But this raises difficult antitheses, for the mind is more than lived through, it is 'minded'; and to say that objects are cognised suggests that we cannot know our minds, but in a quite real sense we know our minds, though we do not know them by way of contemplation as we know external objects. Both sets of existences can be treated scientifically, for the physical sciences are the description and explanation of external objects, and psychology and the other mental sciences are description and explanation of the enjoyed thing. Enjoyments do not preclude description. On the contrary, as Locke knew, they are sometimes easier to describe than external things. Enjoyment can enjoy itself to the highest degree of analytical refinement. It only does not contemplate itself.

But though the enjoyed and the contemplated are so differently experienced, it may be observed that the distinc-

[1] I propose in a later paper to return to this experience of togetherness in its connexion with relations in general.

[2] Perhaps I should say at once that compresence does not mean simultaneity in time. I am compresent with a past event which I apprehend. And indeed the events I perceive always are past, by however small an interval. Compresent means simply belonging to the same universe.

tion is not peculiar to the two groups, mind and physical things. On the contrary the distinction occurs on other levels of existence. I will assume for the moment that life is not necessarily also mind. Well! On the level of life, before mind came into existence, living things so far as living enjoy their life and contemplate mere physical things. No living being can share its life with another living being, it cannot live the other's life, it can only live its own, and just because of this it cannot contemplate its own. Even on the level of mechanical existence, before life has appeared, the same thing holds true. Each piece of matter exists to itself ; we who contemplate several of them can compare and identify them, and discover the general laws of their actions ; but could we penetrate into the nature of each, we might find in each its distinctive difference, and that it contemplates other pieces of matter and does not share their existence.

In the same way there is no difficulty in supposing higher forms of existence than our own to which our minds would be contemplated objects. Let us call such beings angels. Each angelic being would enjoy its own angelical existence, of which we can say nothing except that it must include mind and all lower forms of existence. But the angels would contemplate our minds much as we contemplate physical things. Wherever then a new order of beings emerges, those beings enjoy their own peculiar existence, each his own, but they contemplate everything lower than themselves. The distinction of what we enjoy from what we contemplate is therefore not peculiar to man. He shares it with at least the angels, and the method of philosophy which is based on this distinction must therefore be angelical.

3. *Result of this distinction.*—Thus our experience shows us that there are two orders of things. One is my mind, or your mind if you are the inquirer, and the other is external things. It affirms this difference, but at the same time it assures us that our mind is but one thing amongst a multitude of others, only that it happens to be enjoyed and not contemplated. These two facts, the likeness of mind and things and the unlikeness of mind and things, dictate metaphysical procedure.

In the first place they exclude certain principles of method. (*a*) They exclude the principle that other things depend on mind. For the fundamental fact of experience informs us that mind is but one thing together with external things in the same way as one external thing is together with another. There is one universe in which both kinds exist.

The phenomenon of knowing arises from the special and doubtless exalted character of the thing which is enjoyed. But though it clearly follows that things would not be perceived or thought except there were a mind to perceive them, it by no means follows that they owe to mind their nature but only the fact that they are perceived. They do not owe to mind their perceptual or thought character, all that they owe to mind is that their perceptual or thought character becomes revealed.

If idealism is understood not as it is sometimes understood in the vague sense of asserting that things form a system (which is compatible with many different forms of philosophy) but in the proper sense that somehow things depend for their reality on mind, then idealism is excluded by our principle. All attempts to make metaphysics into epistemology mean exalting unduly the fact of knowing, which however important is but one kind of relation in the world among others, are therefore condemned.

(*b*) It excludes the principle that mind is co-extensive with physical things, if not with life. For to suppose that physical things are at bottom mind is to overlook, not, as the former group of theories overlooked, the fundamental community of mind and things, but the fundamental difference of mind and things which is expressed by saying that the one is enjoyed and the others contemplated. Under this ban would come a doctrine such as panpsychism, the simpler forms of monism, such as Spinoza's, while a monadism like that of Leibniz would stand in need of qualification.

4. *The Method of Metaphysics.*—Having discovered what the method of metaphysics is not, we may now proceed to sketch what it is. Metaphysics, as distinguished from particular sciences, may be regarded as an attempt to describe the ultimate nature of existence and the pervading or pervasive characters of things, a definition sufficiently near to that of Aristotle to be regarded as identical with his. The pervasive characters of things, such as thinghood or substance, quantity, relations of time and space, are distinguished from the special characters which things have in virtue of their individuality; on the other hand their individuality is a pervasive character. Now whatever the result may be, we can say on the strength of the fundamental principles laid down above that the method of metaphysics must like those principles themselves be empirical. Though concerned with different facts, or with facts of a different order, metaphysics and science alike are concerned to describe and systematise

facts of experience, furnished in the last resort, after whatever use of adminicula, by simple inspection. The distinction of science and metaphysics is a question not of method but of frontiers.

But secondly these principles indicate in what direction we should look for the pervasive characters of the world. For our fundamental fact informs us that mind or that which is enjoyed is but one thing together with other things in the world, endowed with the highest quality we are aware of, namely consciousness or knowing, but still only first among equals. Mind is but the most gifted individual in a democracy of things. Moreover allowing for the difference in the distinctive character of mind, the relation of mind to things is not of itself different from the relation of things to one another. All that experience tells us is that all are equally together with one another. We are hence led to expect that we may use our experience of the one kind in order to understand the other: that to discover the pervasive characters of things contemplated we may first look to our enjoyments, and *vice versâ:* that to understand objects in their fundamental characters we may examine ourselves, and to understand ourselves we may take hints from objects. Further that relations between ourselves and objects, and relations between objects themselves may thus be used to elucidate each other.

5. *Proof of the method.*—But thirdly this precept which is thus put forward as likely to yield guidance in our inquiry is enjoined and established, when we remember that what is enjoyed does not subsist by itself in independence of what is contemplated, but that it has a peculiar relation to one of the objects contemplated, and that consciousness, the distinctive feature of such enjoyments is a character, a specific character of this object: in other words, that mind is a character of or a function of a body which is also physical and vital, like the other objects which mind contemplates. Mind is, to use a metaphor, the flower of a thing which is in other respects merely alive and physical. Or we may put the matter in the reverse way, and say that certain physiological processes are not merely physiological but also mental.

This truth is established by experience, and experience of the most familiar kind, slowly acquired and cumulative and voluminous in its effect, but just because of its familiarity not always easily recognisable. It is of two main sorts.[1] In the

[1] This topic is treated more fully in the paper on "Self as Subject and as Person," §§ 4, 5 (*Proc. Arist. Soc.*, vol. xi., 1910-1911).

first place we become aware of a special intimacy of our enjoyments and our body because all our enjoyments end in bodily reactions, whether organic or motor. No matter what objects we contemplate and however speculative they may be, whether they are objects of sensation or perception and therefore intensely practical or thoughts remote from practice; sooner or later, by successive levels of approximation to a sensory contact with the real world, our enjoyments corresponding to these objects issue in a bodily reaction which we contemplate. In this way the contemplated body is joined in our experience with our enjoyments rather than with the series of external events. With the series of external events it is indeed in a certain sense discontinuous. For while all external series apprehended by me are succeeded by some change in my body, this change is not apprehended in continuity with them in the same way as we apprehend the continuity between the members of the series itself. When the wind blows a chimney down, the causal continuity is contemplated of these two events, but I am aware of no such continuity between the falling chimney and my ducking my head to avoid the bricks. When I observe *you* performing the same action I can with a little science fill up the gaps; your eyes are excited and through certain nervous processes your body reacts in the movement of avoidance. But I do not contemplate in your case the accompanying acts of mind, and, for all that I observe, you might be an automaton, as some have believed. On the other hand, in my own case I do enjoy the sight of the falling chimney, but I am not aware of the excitement of the eyes or the later nervous processes which issue in the motor discharge, and so long as I am engaged in contemplating the falling chimney I cannot contemplate these bodily intermediaries in myself. When I do so contemplate them, in thought founded on physiological knowledge, I am no longer contemplating the falling chimney. In this sense the action of avoidance is discontinuous with the external causal events. On the other hand, some action of my body is always contemplated in close relation with the last step in my series of enjoyments. In this way we come, by the most obvious experience, to enjoy our mental series together with our body, in a way in which we do not experience them together with any other contemplated object. We are always making the discovery of the privileged position of our body, that while it belongs to the physical world, it is always contemplated together with our enjoyment of our minds.

This source of experience comes in to reinforce another

which is not less certain but far less obvious in exposition. We are directly aware that our mind and body are one thing because we experience them in the same place. The familiar primitive idea that the soul is extended like a physical thing meets with incredible repugnance on the part of the man who has learned to distinguish between his enjoyments and what he contemplates. Still more the equally empirical proposition that mental processes occur and are enjoyed in space. Yet it is acknowledged that mental processes occur in time, have the temporal characters of succession and duration, though indeed some who distinguish mind itself from its processes declare that mind to be timeless. But there is no greater difficulty in the spatial than in the temporal character of mind and its processes, and both are equally empirical facts. For mental processes are not contemplated in time but enjoyed in it. To neglect this difference leads inevitably to the belief that time is not something objective but subjective, whereas time is contemplated in external things and enjoyed in mental life. And again experience shows us that each mental event occurs in the same moment of time as some external event (though not necessarily and indeed never the event which is said to be present when we perceive its happening). Precisely the same thing is true of space. The repugnance arises, apart from moral causes, from the supposed difficulty of seeing our minds in space. But in enjoying our minds we do not contemplate any spatial character but enjoy it, and the example of time is sufficient to show that the same character may be both contemplated and enjoyed. The experience of ordinary crude common-sense assures us that our mental processes are located somewhere within our bodies, that is, are enjoyed in places also contemplated as somewhere within our bodies. The exact locality is very uncertain. But there is the same uncertainty of exact localisation in time, where we suppose that we perceive events at the moment of their occurrence, whereas more exact experience tells us that we always perceive a physical event a small but measurable interval after its occurrence, and we fancy that we see a star like Sirius shining at the moment we see it, when it has taken the light nine years to reach us, and Sirius may be annihilated at the moment we see him shining. Thus it is only more careful observation that tells us that the space in which the mind is spread out is not our hearts or our feet but our heads, or our nervous system generally, or that special mental processes have a distinct course in our heads; and it is only by knowledge of an advanced kind, not possessed by the ordinary man, that we

acquire strictly accurate notions of the locality of our nervous processes, so far as they are known. In like manner special knowledge and methods are necessary to define what physical events really are contemporaneous with the mental processes themselves.[1]

In these ways then we learn by experience, helped out of course by reflexion on it, that mind and body are not two things but one. They are in the same place, and every mental process issues in some bodily reaction because it is in one of its aspects itself a bodily process. Certain living bodies have minds; in those bodies, certain vital processes possess mentality and are mental processes as well as vital. Thus the relation between mental and vital process is of the same sort as the relation between vital and physical or chemical processes. Certain chemical processes live. In like manner certain living processes enjoy or apprehend. Thus the highest thing we experience, a conscious organism, exists on at least three levels of existence. The living level with its distinctive properties of irritability and adaptation is founded on a lower level of material actions, whatever those actions are. The highest level of conscious process is founded on a lower level of living process. Thus all "minding" is living as all living is motion. But not all motion is living and not all living is mind. Only certain refinements and organisations of material action live, only certain refinements and organisations of living action "mind".[2]

[1] To the angels, the matter would present no difficulty, and our method requires us to ask how things present themselves to them, as far as we can. To them our minds would appear spread out in space and occurring in time, just as we see vital processes in a plant occurring in time and place. We cannot tell what consciousness would look like to them in contemplation. We should need to have the enjoyment of angels before we could have the contemplation of mind. At most as we watch the behaviour of animals or of one another we see a living thing which behaves as if it had mind, and of whose mentality we have not sight but assurance, partly from his words if he is a man, partly from certain experiences which we share together, as for example common pursuit of the same object, *e.g.* food, of which one deprives the other, or common interests which are not attained except upon the supposition that the other partner is conscious (*e.g.* sexual interests).

[2] It is clear that this statement of the relation of body and mind or of neurosis to psychosis is not the same as the so-called doctrine of psychophysical parallelism. In fact it shows that doctrine to be gratuitous. For there can be no parallelism except there are two series to be parallel, and the mental process and the physiological one are now shown to be one and the same. We can of course distinguish the conscious characters, or enjoyed characters, from the merely physiological or contemplated ones. But the mental process is not a separate existence from the physiological

6. *Proof of the metaphysical method (contd.).*—From these results of experience, we can proceed to establish the method recommended by our fundamental principle. For each thing which exists on a higher level contains the lower level of existence. But when we compare the higher with the lower level we distinguish the specific character of the two levels from characters which are not specific. Thus sensible quality (colour, smell, etc.) is specific to material existence, life to living processes, consciousness to mental. The specific characters of the lower activities are of course carried on into the *thing* which is founded on them, but not into the new *processes* which are founded on them. Thus a living body has colour and smell, but life itself is not coloured or fragrant.

one but the same; and except for the distinguishing character of consciousness the other features of the neurosis are carried up into the psychosis. Indeed to distinguish the two series as running parallel is to treat the neurosis as if it would be the same thing *as a neurosis* if it were unaccompanied by consciousness; and this is accurately untrue, and if it were stated as a fact would be the falsity of epiphenomenalism.

Accordingly psychophysical parallelism is for the most part regarded not as a law of nature but as a mere working hypothesis or convenience for psychology. But it is useless even here. The convenient generalisation which psychology might use is that every psychosis is also a neurosis, and this is true. The hypothesis of *parallelism* which implies two series is a fiction for psychology as well as a metaphysical untruth. The parallelism that concerns psychology is that between two really different series, on the one hand the mental (or physiological) processes, and on the other the non-mental or physical series of the objects which the mental process contemplates. It is the parallelism of mind and external things (what Prof. Ward calls the neurophysical parallelism). But this last designation is apt to lead to confusion.

It is difficult to believe that the hypothesis of psychophysical parallelism would have been invented except for the error of supposing that mental processes had differences of quality corresponding to their stimuli. If we imagine them to have contents (other than their direction, or intensity, etc.) corresponding to the quality of their real objects, so that in some way mental processes are qualified, not indeed as being green or sweet, yet by some quality or other, and that hence states of mind have contents in the form of presentations, however conceived; then the idea of parallelism is a natural and inevitable one. For the neurosis merely presents varieties of *process:* it is swift or slow, occurs in one structure and not another; and it is impossible to understand the connexion between such differences and the quality which makes the sensation of green different from that of sweet. But when once we realise that mental processes have for their distinguishing features, or "contents," not differences of quality but purely process differences, intensity, duration, and what I call direction, and that the supposed differences of quality are really differences in the objects revealed by those processes, the ground for the alleged parallelism gives way. The differences in the neural process are carried up in their appropriate form into the mental process differences. The theory appears therefore to be really a piece of lingering introjectionism.

But there are other characters of the lower level which are not specific. Thus causality exists between material bodies or between the particles of a single material body. Now this relation is carried on into the living process, where causality can be detected in the relations of living processes to one another, or between the stages of the same living process. Thus since each lower level is carried on into the next level of process of which it is the foundation, certain characters of the lower level are represented in the higher. So, to compare life and mental enjoyment, causality is a character of living process which is carried on into enjoyment. It follows in accordance with this conception that where enjoyment has characters different from its own distinctive and peculiar character of consciousness, these characters will be possessed also by its own vital or physical substratum. Thus what is contemplated by us in physical or living things as a certain kind of relation such as causality will have corresponding to it a certain character in enjoyment. What is contemplated is in such cases also enjoyed.

Now in order to discover these characters of things which are represented at the higher stage we must put ourselves where we are experiencing these characters from the inside, that is in the enjoyment of ourselves. What we can only contemplate and cannot also enjoy we can only accept as characters of parts of the real world, but as we cannot enjoy them we cannot tell what they are to their own possessors.

7. *The Categories.*—Here then we have the clue to the pervasive characters of things. They are familiar to us as the categories, whether of sense or understanding. They are characters of things, but they are those characters which are both enjoyed and contemplated. They are found both in mind and in things outside us. And it is this which gives them the prerogative position which has induced philosophers upon occasion to deny that they are contained in experience, and in some form or other to regard them as forms imposed upon things by the mind. Being as it were the canvas on to which the greatest diversity of things, things varying in their specific characters, is worked; remaining the same whether we are experiencing the extraordinary variety of material objects, or of living beings, or even of minds; they are the fundamental characters of things and deserve that their position in the scheme should be marked by such terms as forms or *a priori*. But they are as much experienced as colours or tables; they only have a greater value. But they do not belong to mind as such nor are de-

pendent on it and they are not specific to mind, of which the truly specific character is consciousness or enjoyment. They only stand in closer relation to mind because we who are minds, in our enjoyment of them, as distinct from our contemplation of them in external things, experience them from the inside, and it is therefore by describing them as we enjoy them that we must discover their real nature as they are for the things which we contemplate also as having these characters. Without raising the question of their number or relation to each other, we may enumerate some of these characters which we can experience both in ourselves and in what is not-ourselves. We can enjoy in ourselves, time-character and spatiality, continuity in the form of substance and in the form of causality, intensity, identity and difference.

Let us take in particular causality because of the historical *rôle* it has played in philosophy. It is an illustration of the fundamental principle, that minds and mental events are but things or events in a world which contains equally physical things and events, and that what distinguishes the mental is but its new specific character of consciousness. For causality is experienced not merely in the connexion of external events, but in the action of our minds or wills upon external things, in manipulating or altering them, and in the internal actions of our own mind within itself, for instance in calling up ideas. But if we seek to find the real nature of causality, we must look for it first in our own mental history. Regard contemplated objects only and causality seems to be undiscoverable except as uniform sequence. But turn to our own minds in the experience of willing, whether a change in our own ideas or a change in external things, and we become aware in enjoyment of the continuous transition of one mental process into another in time; for example, the continuous transition of the imagination or thought of my arm being lifted into the perception of the arm being lifted. What we experience here is continuity in succession and the outcome of the final process from its antecedent. This is the enjoyment of what we afterwards call power. When we turn with this experience to external causality, we can now more easily discover in contemplated events the same features of continuity in a definite order of succession, the continuous sequence of the falling of the chimney on the blowing of the wind. Thus a certain enjoyed experience enables us the more easily to discover in external things a character which we call physical causality, and we can then go back and call that enjoyed

experience causality also. And it is notorious that we do thus use our internal and our external experiences to reinforce and elucidate each other.

Consequently if we have made an imperfect or erroneous analysis of the external relation we transfer this error to our minds. Hume's error has often been pointed out, when he criticised the doctrine of Locke that we most easily experience causality or power by observing the action of our wills either upon our bodies or the course of our ideas. He supposed that because we do not know the movements in our nerves which intermediate between our wills and our acts, we cannot therefore be aware of causality, overlooking this very experience of internal process which Locke had tried, most imperfectly, to describe. Hume looked for a contemplated object, where his attention had been directed to an enjoyment; and consequently he could find in mental action only the same sequence as he found in contemplated objects.[1]

But the above statement is far from being satisfactory or sufficient. It is true that he who seeks for causality will find it most easily by observing the enjoyments which constitute an act of will. But this might suggest two misunderstandings which must be guarded against. It might be thought that experiencing causality in our wills, we interpret external things after our own likeness by an analogy. Now it may be after our own likeness that we attribute, as the primitive mind does, a will and mind to things like trees or dolls. But it is not by analogy that we attribute to them causality. Our enjoyed experience enables us to find the same features in external things; not merely to impute them, as it were by a hypothesis which is found to work successfully. The causality is there in the things, and we merely are the better able from our own enjoyment to see it and enter into its nature. But in the next place, the statement might lead us to suppose that it is by a happy accident that we understand causality in the mental phenomenon of willing, and that there is no vital connexion between the experience of causality in ourselves and in the external world. The fact is that willing, though the most favourable case for observing causality in ourselves, is but a special case of causality, where the ultimate result is anticipated in idea. But the experience is not confined to willing. We have it

[1] No doubt his failure to apprehend the fact of mental continuity would in any case have stood in the way of his recognition of continuity in things. Also it must be remembered that the ideas of reflection of which Locke spoke were for him contemplated objects, not enjoyed ones.

wherever we experience the determinate continuous sequence of one mental process upon another within one interest. When the milk-cart comes and the rain falls there is no immediately continuous sequence of the one mental process of perception on the other, as there is in the perception of the falling chimney when the wind has blown. But wherever this continuous and determinate sequence of one mental process on another occurs, there we have enjoyed causality. Willing is one case of this general rule. Enjoyed causality is thus determinate continuity in the succession of mental process. (Where we will, we have in addition the enjoyment of active causality.) Now it is not accidental that this simpler experience of causality should also lead us to the discovery of causality outside us. For mental processes do not exist without their objects, which are external; though I may sometimes be interested in the internal process, and sometimes in the external object. To enjoy continuous and determinate sequence of one mental process on another in myself is at the same time to contemplate in the objects of those mental processes some corresponding character, and this is their causal connexion, their continuous and determinate sequence in time. Every experience of external causality gives me also an enjoyment of my own causality, and every experience of my own causality means that I contemplate causality in external events. That the determinate continuous succession in external events means also as a matter of fact uniformity of occurrence has its correspondent internal experience of uniformity, for a causal connexion in things means also for me the habit of expecting the one when I have seen the other. Hume, overlooking continuity both in external things and in mental process, mistook a symptom for the fundamental character.

Thus to enjoy a category in myself is also to contemplate a category outside me. I will not enter into questions of interpretation of Kant, and I will not say that this is what his demonstration of the Analogy of Causation meant. One patent difficulty in so maintaining, is that for Kant as for Locke the empirical self given in ideas of reflexion was an object not enjoyed but contemplated. But so far as the proof of that Analogy means that for an event there must be empirical material, and that it must be related with some other event in time according to some rule of antecedence and sequence, the proof seems to depend upon considerations such as the above, and if Kant did not mean the above he might well have meant it. As another instance of a category which at once illustrates the proposition that a category

is both enjoyed and contemplated, and the affinity of this proposition to the Kantian method, I will take that of intensity or intensive quantity. What is enjoyed in the mind is intensity, what is contemplated in the object is the 'degree' of the *sensum;* and both intensity and degree are the same character, appearing the one in the mental process, the other in the object. The candle-light has extensive quantity in so far as it is measurable in terms of the unit light. It has intensive quantity or degree in so far as its brightness occupies a determinate place upon a scale of brightness, measured by its interval from some fixed point upon the scale. Now the distinctive quality of the *sensum* we can learn only from contemplation, but that it will have some degree or other is guaranteed by the intensive quantity which the sensing process by which we apprehend it possesses. Kant called this truth an Anticipation of Observation.

8. *A Priori Ideas.*—We may stop to consider the bearing of this conception of the categories upon the time-honoured question of the origin of *a priori* ideas and principles. Kant's version presents us with a miracle; Spencer's with a biological improbability. To Kant, the categories are the non-empirical elements contributed to experienced objects by the mental partner of that experience. But however unjust it may be to him to describe his system of categories and forms of sense as mere tools for working up experience, a "machine-shop" in James's phrase, it remains nothing short of miraculous that causality if not intrinsically contained in the empirical contents of experience should get into them from the outside. And as we have seen it really does belong to the "empirical instruction". On the other hand the Spencerian attempt to trace these categories to the accumulation of experience which does not originally contain them, to regard them as acquired in the history of the race however much they may be original to the individual, appears to have against it biological principle, even if we could anyhow understand how for instance a combination of visual and motor experience, inherited through no matter how many generations, could come in the end to *feel* like space. Is there more hope from James's own doctrine, safe as it is against biological objections? James has suggested (in the famous concluding chapter of his Psychology) that the categories belong to those portions of our knowledge which instead of coming in by the front door of sense come in by the back door of variations in cerebral tendencies. Just as we may see yellow, not only if we look at a field of buttercups but if we stimulate the optical parts of our nervous

system from within by a dose of santonin; so, causality is the fortunate endowment of a brain or mind which succeeds by envisaging objects in this way.

But fascinating as this doctrine is, and conceived in strict consistency with evolutionary precedent, it involves a miracle no less than that of Kant, and one indeed of much the same sort. The analogy with sensation breaks down upon examination. For if yellow may be presented to us by internal causes, it may also be presented to us by external objects. But number, to take this unexceptionable category, is not, upon this theory, induced in us by objects. The only usefulness of the analogy of yellow is that it shows that a sensation may be excited internally as well as externally, though the question is still left open whether the brain would be functional for sight sensations if it had not first been impressed from without. But the real difficulty remains untouched. For granted that yellow is *a priori*, the buttercup is empirical or *a posteriori*. For though each of its sensible qualities be admitted to be mental (needless to say I do not admit this) yet avowedly the collocation of sensible qualities in the whole thing called a buttercup is empirical. In what sense then can we say that this empirical combination has a certain *number* of petals, or how can any empirical proposition be said to verify a pure creation of the mind? For to verify numerical truths empirically the empirical propositions must contain numerical characters. Now this is precisely under another form the same problem as Kant failed to solve. There is still the imposition of purely mental creations upon empirical products. To show that we perish unless we think the world in the light of these original endowments of the mind is indeed to prove their necessity; but it does not prove that they are not empirical. The difficulty can only be evaded if all our thoughts are treated as original, if the mind becomes a Leibnizian monad, but in that case all mental affections would, strictly speaking, be equally *a priori*.

Upon the view of the categories maintained in this paper, all these difficulties disappear. For instead of being specific to the mind, they are just those characters in the world which are pervasive and possessed by things as well as mind. They too are empirical, though of a higher order of significance than *a posteriori* experience such as Kant called empirical, under which head be it observed we should have to include consciousness itself which is distinctive of mind. They are therefore in no sense modes of envisaging empirical data, nor instruments for working those data up into intelligible products. They are those characters which are carried up

from material existence into mental existence and are present there in enjoyment. They belonged to things before the particular thing which has the property of knowing came into existence. We do not need to verify our conception of causality by empirical experience, for those empirical objects already contain it. Rather in coming to be aware of empirical connexions of events we are able to verify in ourselves, only in the form of enjoyment, the same experience as enters into empirical connexions.

We may perhaps ask, is there then no room for the application in the theory of knowing of the idea of successful variation which James attempted to use with what seems to me so brilliant a failure? The answer is given at once if we remember that mental processes are but instrumental to the revelation of the world, and the consequent maintenance and perfection of the being which possesses mind. Consciousness is that fortunate variation, the invention of a brain fitted to possess such a character, and connected with such organs as our eyes and ears, that it can learn more of the contemplated characters of things, their colours, shapes, etc., than is possible to a being which has no such organs, or such consciousness; and moreover one which can contemplate things without confusion or error, not like the minor unlucky variations we call colour-blind persons. But as for the categories or other *a priori* parts of knowledge, if any such there be, no successful variation is needed to secure experience of these, at least within the history of the living or the knowing being. These successful variations were secured, if such language is at all legitimate, in the purely material world. We need no happy thought of causality in order to understand our world. The operation of our mental processes according to that pattern is its inheritance from its non-mental ancestry. It is part of the constitution of our brains and enjoyed therefore by our minds. On the contrary it would be the first condition of insuccess to vary from this pattern, to have a mind which enjoys no continuity, a state to which our failures in the shape of insane persons afford approximations. In this sense it is true in the famous phrase that the categories are the conditions without which no experience is possible. They are not fortunate variations of knowing. Besides the fortunate invention of knowing itself, *i.e.* a consciousness responsive in its processes to the world of things, the fortunate variations in the history of consciousness are those not phylogenetic but ontogenetic ones, which constitute scientific or musical or other endowments, by which a larger discovery is possible

not of the pervasive forms of existence but of its empirical facts : the turn of brain or mind which invents hypotheses of gravitation or the Choral Symphony or the like.

9. *Categories and Empirical Characters.*—Thus the categories are those characters of things which we both enjoy and contemplate. Except our own distinctive consciousness which we enjoy, all other characters we only contemplate and therefore do not experience from the inside. But though in material things we contemplate their categorial characters, those characters are characters of the distinctive nature of things which we only contemplate and may be said therefore to be enjoyed by them. Thus material things are coloured or sonorous, but themselves 'enjoy' not only their colours but their categorial characters. It is only in these categorial characters, which we can enjoy in ourselves and contemplate in them, that we can penetrate into their private existence. This is why the primary qualities of things, which are the spatial and temporal characters of their sensible qualities, have a predominant importance for us, why we rightly regard them as fundamental. All that we can do with regard to their secondary or distinctive qualities is to note them as they come before us for contemplation, and to discover if we can what relation their intensive quantity bears to the extensive spatial characters which they share with us and other things. We can in other words try to discover the relation between them and the categorial characters. But what colour is to the thing which is coloured we cannot know from the inside. Hence when Locke in a well-known passage declared that, were our senses sufficiently acute to detect the primary qualities of the minute particles of which things are composed, the secondary qualities would disappear, he was abolishing from the world all characters but the categorial ones. We may consider the vibrations or other internal motions of bodies, but there still remains the single pulse of distinctive enjoyment into which those vibrations are "condensed," and which appears to our contemplation as colour. Hence it is not without reason that M. Bergson in the course of a highly suggestive passage,[1] speaking from his own point of view, declares that if we could slow down the rhythm in which these vibrations are presented to our apprehension, the colour though diluted would remain.

Among the characters which we can only contemplate and not enjoy, which therefore we cannot know from the inside is life itself. This may sound paradoxical, since we

[1] *Matière et Mémoire*, ch. iv. p. 226.

are commonly said to enjoy our lives; but strictly speaking we only contemplate life in ourselves just as we do in plants, which I suppose not to be conscious. When we enjoy our lives what we enjoy, in the technical sense of this paper, is the conscious process which has that life for its object. It is our living bodies which in this strict sense enjoy life, experience it from the inside. We in our consciousness contemplate it as much as we contemplate the colour of our hands. But it is even more important to note that life is a distinctive character of living beings which we may describe by its contemplated features of irritability and reaction or analyse as far as we can into its chemical and physical foundations, but whose distinctive enjoyment is neither to be identified with these underlying characters on the one hand nor with the distinctive character of consciousness which in turn is founded upon it. As colour to its underlying primary qualities, so is life related to its underlying chemical and physical processes, processes among things which have all the distinctive characters, colour, taste and the like, of the material world. The enjoyment which is life, as experienced by those beings which have attained to life and have not advanced beyond, is the single pulse in which its underlying activities are condensed. And in like manner consciousness itself represents a condensation into this peculiar enjoyment of what as contemplated must be described as mere complication of nervous processes. Just as, to take a parallel from another sphere, the king reposes upon the substructure of the whole State, which his kingship sums up and condenses, but that kingship is not exhausted by all the functions of the State which sooner or later converge upon his person.

10. *Problems.*—Metaphysics has not only to discover the pervasive characters of things, but their relation to one another and to the distinctive characters of the several orders of existence. In the first place it would ask whether the fundamental or categorial characters are independent, or some primary and some secondary. In doing so it would come straight upon the old question of the nature of being itself. Is time for instance the real tissue of things? Or space? Or both? It would ask what the enumeration of the categories is. And one result would seem to stand out from the method of this paper. Since the categories are the characters which are carried up from level to level, and there are no more in mental enjoyment than in life or matter, their number is not increased by further knowledge nor grows in the evolution of things. That evolution has

for its office to bring out new things with their distinctive character. By doing so it will bring to light distinctive features of things which have hitherto been unrevealed. We might easily imagine a being with more sense organs than man, and therefore sensitive to physical properties which we cannot know. But this will add to empirical or *a posteriori* experience but will not add to nature a single fundamental. From this point of view it is a cardinal mistake to regard the development of the world as Hegel did as an evolution of categories. It is an evolution of forms of distinctive existence.

Next it would seem therefore that quality is not a category. For although every finite thing has a distinctive quality, there is no identical quality which belongs to them all in the same sense as all things are spatial or occupy time. Quality has categorial character so far as it possesses intensive quantity or degree (as indeed Kant admits). And lastly that quality or the distinctive character which the forms of existence do not share with other forms represents the differentiating element in the constitution of the world. It is the element of finitude somehow introduced into the infinite foundations of things, and it would be the business of a profounder study than this to explain the secret of this breaking up of the whole continuum into these "finite centres" of existence.

II.—DOES MORAL PHILOSOPHY REST ON A MISTAKE?

By H. A. Prichard.

Probably to most students of Moral Philosophy there comes a time when they feel a vague sense of dissatisfaction with the whole subject. And the sense of dissatisfaction tends to grow rather than to diminish. It is not so much that the positions, and still more the arguments, of particular thinkers seem unconvincing, though this is true. It is rather that the aim of the subject becomes increasingly obscure. "What," it is asked, "are we really going to learn by Moral Philosophy?" "What are books on Moral Philosophy really trying to show, and when their aim is clear, why are they so unconvincing and artificial?" And again: "Why is it so difficult to substitute anything better?" Personally, I have been led by growing dissatisfaction of this kind to wonder whether the reason may not be that the subject, at any rate as usually understood, consists in the attempt to answer an improper question. And in this article, I shall venture to contend that the existence of the whole subject, as usually understood, rests on a mistake, and on a mistake parallel to that on which rests, as I think, the subject usually called the Theory of Knowledge.

If we reflect on our own mental history or on the history of the subject, we feel no doubt about the nature of the demand which originates the subject. Any one who, stimulated by education, has come to feel the force of the various obligations in life, at some time or other comes to feel the irksomeness of carrying them out, and to recognise the sacrifice of interest involved; and, if thoughtful, he inevitably puts to himself the question: "Is there really a reason why I should act in the ways in which hitherto I have thought I ought to act? May I not have been all the time under an illusion in so thinking? Should not I really be justified in simply trying to have a good time?" Yet, like Glaucon, feeling that somehow he ought after all to act in these ways, he asks for a *proof* that this feeling is justified. In other

words, he asks "*Why* should I do these things?" and his and other people's moral philosophising is an attempt to supply the answer, *i.e.* to supply by a process of reflexion a proof of the truth of what he and they have prior to reflexion believed immediately or without proof. This frame of mind seems to present a close parallel to the frame of mind which originates the Theory of Knowledge. Just as the recognition that the doing of our duty often vitally interferes with the satisfaction of our inclinations leads us to wonder whether we really ought to do what we usually call our duty, so the recognition that we and others are liable to mistakes in knowledge generally leads us, as it did Descartes, to wonder whether hitherto we may not have been always mistaken. And just as we try to find a proof, based on the general consideration of action and of human life, that we ought to act in the ways usually called moral, so we, like Descartes, propose by a process of reflexion on our thinking to find a test of knowledge, *i.e.* a principle by applying which we can show that a certain condition of mind was really knowledge, a condition which *ex hypothesi* existed independently of the process of reflexion.

Now, how has the moral question been answered? So far as I can see, the answers all fall, and fall from the necessities of the case, into one of two species. *Either* they state that we ought to do so and so, because, as we see when we fully apprehend the facts, doing so will be for our good, *i.e.* really, as I would rather say, for our advantage, or, better still, for our happiness; *or* they state that we ought to do so and so, because something realised either in or by the action is good. In other words, the reason 'why' is stated in terms either of the agent's happiness or of the goodness of something involved in the action.

To see the prevalence of the former species of answer, we have only to consider the history of Moral Philosophy. To take obvious instances, Plato, Butler, Hutcheson, Paley, Mill, each in his own way seeks at bottom to convince the individual that he ought to act in so-called moral ways by showing that to do so will really be for his happiness. Plato is perhaps the most significant instance, because of all philosophers he is the one to whom we are least willing to ascribe a mistake on such matters, and a mistake on his part would be evidence of the deep-rootedness of the tendency to make it. To show that Plato really justifies morality by its profitableness, it is only necessary to point out (1) that the very formulation of the thesis to be met, *viz.*, that justice is ἀλλότριον ἀγαθόν, implies that any refutation must consist in

showing that justice is οἴκειον ἀγαθόν, *i.e.* really, as the context shows, one's own advantage, and (2) that the term λυσιτελεῖν supplies the keynote not only to the problem but also to its solution.

The tendency to justify acting on moral rules in this way is natural. For if, as often happens, we put to ourselves the question "Why should we do so and so?" we are satisfied by being convinced either that the doing so will lead to something which we want (*e.g.* that taking certain medicine will heal our disease), or that the doing so itself, as we see when we appreciate its nature, is something that we want or should like, *e.g.* playing golf. The formulation of the question implies a state of unwillingness or indifference towards the action, and we are brought into a condition of willingness by the answer. And this process seems to be precisely what we desire when we ask, *e.g.*, "Why should we keep our engagements to our own loss?" for it is just the fact that the keeping our engagements runs counter to the satisfaction of our desires which produced the question.

The answer is, of course, not an answer, for it fails to convince us that we ought to keep our engagements; even if successful on its own lines, it only makes us *want* to keep them. And Kant was really only pointing out this fact when he distinguished hypothetical and categorical imperatives, even though he obscured the nature of the fact by wrongly describing his so-called 'hypothetical imperatives' as imperatives. But if this answer be no answer, what other can be offered? Only, it seems, an answer which bases the obligation to do something on the *goodness* either of something to which the act leads or of the act itself. Suppose, when wondering whether we really ought to act in the ways usually called moral, we are told as a means of resolving our doubt that those acts are right which produce happiness. We at once ask "Whose happiness?" If we are told "Our own happiness," then, though we shall lose our hesitation to act in these ways, we shall not recover our sense that we ought to do so. But how can this result be avoided? Apparently, only by being told one of two things; *either* that any one's happiness is a thing good in itself, and that *therefore* we ought to do whatever will produce it, *or* that the working for happiness is itself good, and that the intrinsic goodness of such an action is the reason why we ought to do it. The advantage of this appeal to the goodness of something consists in the fact that it avoids reference to desire, and, instead, refers to something impersonal and objective. In this way it seems possible to avoid the resolution of

obligation into inclination. But just for this reason it is of the essence of the answer, that, to be effective, it must neither include nor involve the view that the apprehension of the goodness of anything necessarily arouses the desire for it. Otherwise the answer resolves itself into a form of the former answer by substituting desire or inclination for the sense of obligation, and in this way it loses what seems its special advantage.

Now it seems to me that both forms of this answer break down, though each for a different reason.

Consider the first form. It is what may be called Utilitarianism in the generic sense in which what is good is not limited to pleasure. It takes its stand upon the distinction between something which is not itself an action but which can be produced by an action and the action which will produce it, and contends that if something which is not an action is good, then we *ought* to undertake the action which will, directly or indirectly, originate it.[1]

But this argument, if it is to restore the sense of obligation to act, must presuppose an intermediate link, *viz.*, the further thesis that what is good ought to be.[2] The necessity of this link is obvious. An 'ought,' if it is to be derived at all, can only be derived from another 'ought'. Moreover this link tacitly presupposes another, *viz.*, that the apprehension that something good which is not an action ought to be involves just the feeling of imperativeness or obligation which is to be aroused by the thought of the action which will originate it. Otherwise the argument will not lead us to feel the obligation to produce it by the action. And, surely, both this link and its implication are false.[3] The word 'ought' refers to actions and to actions alone. The proper language is never "So and so ought to be," but "I ought to do so and so". Even if we are sometimes moved to say that the world or something in it is not what it ought to be, what we really mean is that God or some human being has not made something what he ought to have made it. And it is merely stating another side of this fact to urge that we can only feel the imperativeness upon us of something which is in our power; for it is actions and actions alone which, directly at least, are in our power.

[1] *Cf.* Dr. Rashdall's *Theory of Good and Evil*, vol. i., p. 138.

[2] Dr. Rashdall, if I understand him rightly, supplies this link (*cf. Theory of Good and Evil*, vol. i., pp. 135-136).

[3] When we speak of anything, *e.g.* of some emotion or of some quality of a human being, as good, we never dream in our ordinary consciousness of going on to say that therefore it ought to be.

Perhaps, however, the best way to see the failure of this view is to see its failure to correspond to our actual moral convictions. Suppose we ask ourselves whether our sense that we ought to pay our debts or to tell the truth arises from our recognition that in doing so we should be originating something good, *e.g.*, material comfort in A or true belief in B, *i.e.*, suppose we ask ourselves whether it is this aspect of the action which leads to our recognition that we ought to do it. We, at once, and without hesitation answer 'No'. Again, if we take as our illustration our sense that we ought to act justly as between two parties, we have, if possible, even less hesitation in giving a similar answer; for the balance of resulting good may be, and often is, not on the side of justice.

At best it can only be maintained that there is this element of truth in the Utilitarian view that unless we recognised that something which an act will originate is good, we should not recognise that we ought to do the action. Unless we thought knowledge a good thing, it may be urged, we should not think that we ought to tell the truth; unless we thought pain a bad thing, we should not think the infliction of it, without special reason, wrong. But this is not to imply that the badness of error is the reason why it is wrong to lie, or the badness of pain the reason why we ought not to inflict it without special cause.[1]

It is, I think, just because this form of the view is so plainly at variance with our moral consciousness, that we become driven to adopt the other form of the view, *viz.*, that the act is good in itself and that its intrinsic goodness is the reason why it ought to be done. It is this form which has always made the most serious appeal; for the goodness of the act itself seems more closely related to the obligation to do it than that of its mere consequences or results, and therefore, if obligation is to be based on the goodness of something, it would seem that this goodness should be that of the act itself. Moreover, the view gains plausibility from the fact that moral actions are most conspicuously those to which the term 'intrinsically good' is applicable.

Nevertheless this view, though perhaps less superficial, is equally untenable. For it leads to precisely the dilemma which faces every one who tries to solve the problem raised

[1] It may be noted that if the badness of pain were the reason why we ought not to inflict pain on another, it would equally be a reason why we ought not to inflict pain on ourselves; yet, though we should allow the wanton infliction of pain on ourselves to be foolish, we should not think of describing it as wrong.

by Kant's theory of the good will. To see this, we need only consider the nature of the acts to which we apply the term 'intrinsically good'.

There is, of course, no doubt that we approve and even admire certain actions, and also that we should describe them as good, and as good in themselves. But it is, I think, equally unquestionable that our approval and our use of the term 'good' is always in respect of the motive and refers to actions which have been actually done and of which we think we know the motive. Further, the actions of which we approve and which we should describe as intrinsically good are of two and only two kinds. They are either actions in which the agent did what he did because he thought he ought to do it, or actions of which the motive was a desire prompted by some good emotion, such as gratitude, affection, family feeling, or public spirit, the most prominent of such desires in books on Moral Philosophy being that ascribed to what is vaguely called benevolence. For the sake of simplicity I omit the case of actions done partly from some such desire and partly from a sense of duty; for even if all good actions are done from a combination of these motives, the argument will not be affected. The dilemma is this. If the motive in respect of which we think an action good is the sense of obligation, then so far from the sense that we ought to do it being derived from our apprehension of its goodness, our apprehension of its goodness will presuppose the sense that we ought to do it. In other words, in this case the recognition that the act is good will plainly *presuppose* the recognition that the act is right, whereas the view under consideration is that the recognition of the goodness of the act *gives rise* to the recognition of its rightness. On the other hand, if the motive in respect of which we think an action good is some intrinsically good desire, such as the desire to help a friend, the recognition of the goodness of the act will equally fail to give rise to the sense of obligation to do it. For we cannot feel that we ought to do that the doing of which is *ex hypothesi* prompted solely by the desire to do it.[1]

The fallacy underlying the view is that while to base the rightness of an act upon its intrinsic goodness implies that the goodness in question is that of the motive, in reality the rightness or wrongness of an act has nothing to do with any question of motives at all. For, as any instance will show, the rightness of an action concerns an action not in

[1] It is, I think, on this latter horn of the dilemma that Martineau's view falls; *cf. Types of Ethical Theory*, part ii., book i.

the fuller sense of the term in which we include the motive in the action, but in the narrower and commoner sense in which we distinguish an action from its motive and mean by an action merely the conscious origination of something, an origination which on different occasions or in different people may be prompted by different motives. The question "Ought I to pay my bills?" really means simply "Ought I to bring about my tradesmen's possession of what by my previous acts I explicitly or implicitly promised them?" There is, and can be, no question of whether I ought to pay my debts from a particular motive. No doubt we know that if we pay our bills we shall pay them with a motive, but in considering whether we ought to pay them we inevitably think of the act in abstraction from the motive. Even if we knew what our motive would be if we did the act, we should not be any nearer an answer to the question.

Moreover, if we eventually pay our bills from fear of the county court, we shall still have done *what* we ought, even though we shall not have done it *as* we ought. The attempt to bring in the motive involves a mistake similar to that involved in supposing that we can will to will. To feel that I ought to pay my bills is to be *moved towards* paying them. But what I can be moved towards must always be an action and not an action in which I am moved in a particular way, *i.e.* an action from a particular motive; otherwise I should be moved towards being moved, which is impossible. Yet the view under consideration involves this impossibility; for it really resolves the sense that I ought to do so and so, into the sense that I ought to be moved to do it in a particular way.[1]

So far my contentions have been mainly negative, but they form, I think, a useful, if not a necessary, introduction to what I take to be the truth. This I will now endeavour to state, first formulating what, as I think, is the real nature of our apprehension or appreciation of moral obligations, and then applying the result to elucidate the question of the existence of Moral Philosophy.

The sense of obligation to do, or of the rightness of, an action of a particular kind is absolutely underivative or immediate. The rightness of an action consists in its being the origination of something of a certain kind A in a situation of a certain kind, a situation consisting in a certain relation B of the agent to others or to his own nature. To appreciate its rightness two preliminaries may be necessary. We may

[1] It is of course not denied here that an action done from a particular motive may be *good*; it is only denied that the *rightness* of an action depends on its being done with a particular motive.

have to follow out the consequences of the proposed action more fully than we have hitherto done, in order to realise that in the action we should originate A. Thus we may not appreciate the wrongness of telling a certain story until we realise that we should thereby be hurting the feelings of one of our audience. Again, we may have to take into account the relation B involved in the situation, which we had hitherto failed to notice. For instance, we may not appreciate the obligation to give X a present, until we remember that he has done us an act of kindness. But, given that by a process which is, of course, merely a process of general and not of moral thinking we come to recognise that the proposed act is one by which we shall originate A in a relation B, then we appreciate the obligation immediately or directly, the appreciation being an activity of *moral* thinking. We recognise, for instance, that this performance of a service to X, who has done us a service, just in virtue of its being the performance of a service to one who has rendered a service to the would-be agent, ought to be done by us. This apprehension is immediate, in precisely the sense in which a mathematical apprehension is immediate, *e.g.*, the apprehension that this three-sided figure, in virtue of its being three-sided, must have three angles. Both apprehensions are immediate in the sense that in both insight into the nature of the subject directly leads us to recognise its possession of the predicate; and it is only stating this fact from the other side to say that in both cases the fact apprehended is self-evident.

The plausibility of the view that obligations are not self-evident but need proof lies in the fact that an act which is referred to as an obligation may be incompletely stated, what I have called the preliminaries to appreciating the obligation being incomplete. If, *e.g.*, we refer to the act of repaying X by a present merely as giving X a present, it appears, and indeed is, necessary to give a reason. In other words, wherever a moral act is regarded in this incomplete way the question, "*Why* should I do it?" is perfectly legitimate. This fact suggests, but suggests wrongly, that even if the nature of the act is completely stated, it is still necessary to give a reason, or, in other words, to supply a proof.

The relations involved in obligations of various kinds, are, of course, very different. The relation in certain cases is a relation to others due to a past act of theirs or ours. The obligation to repay a benefit involves a relation due to a past act of the benefactor. The obligation to pay a bill involves a relation due to a past of ours in which we have either said or

implied that we would make a certain return, for something which we have asked for and received. On the other hand the obligation to speak the truth implies no such definite act; it involves a relation consisting in the fact that others are trusting us to speak the truth, a relation the apprehension of which gives rise to the sense that communication of the truth is something owing by us to them. Again the obligation not to hurt the feelings of another, involves no special relation of us to that other, *i.e.*, no relation other than that involved in our both being men and men in one and the same world. Moreover, it seems that the relation involved in an obligation need not be a relation to another at all. Thus we should admit that there is an obligation to overcome our natural timidity or greediness, and that this involves no relations to others. Still there is a relation involved, *viz.*, a relation to our own disposition. It is simply because we can and because others cannot directly modify our disposition that it is our business to improve it, and that it is not theirs, or, at least, not theirs to the same extent.

The negative side of all this is, of course, that we do not come to appreciate an obligation by an *argument, i.e.* by a process of non-moral thinking, and that, in particular, we do not do so by an argument of which a premise is the ethical but not moral activity of appreciating the goodness either of the act or of a consequence of the act; *i.e.* that our sense of the rightness of an act is not a conclusion from our appreciation of the goodness either of it or of anything else.

It will probably be urged that on this view our various obligations form, like Aristotle's categories, an unrelated chaos in which it is impossible to acquiesce. For, according to it, the obligation to repay a benefit, or to pay a debt, or to keep a promise, presupposes a previous act of another; whereas the obligation to speak the truth or not to harm another does not; and, again, the obligation to remove our timidity involves no relations to others at all. Yet, at any rate, an effective *argumentum ad hominem* is at hand in the fact that the various qualities which we recognise as good are equally unrelated; *e.g.* courage, humility, and interest in knowledge. If, as is plainly the case, *ἀγαθά* differ *ᾗ ἀγαθά*, why should not obligations equally differ *qua* their obligatoriness? Moreover if this were not so, there could in the end be only one obligation, which is palpably contrary to fact.[1]

[1] Two other objections may be anticipated: (1) that obligations cannot be self-evident, since many actions regarded as obligations by some are not so regarded by others; and (2) that if obligations are self-evident,

Certain observations will help to make the view clearer.

In the first place, it may seem that the view, being—as it is—avowedly put forward in opposition to the view that what is right is derived from what is good, must itself involve the opposite of this, *viz.*, the Kantian position that what is good is based upon what is right, *i.e.*, that an act, if it be good, is good because it is right. But this is not so. For, on the view put forward, the rightness of a right action lies solely in the origination in which the act consists, whereas the intrinsic goodness of an action lies solely in its motive; and this implies that a morally good action is morally good not simply because it is a right action but because it is a right action done because it is right, *i.e.*, from a sense of obligation. And this implication, it may be remarked incidentally, seems plainly true.

In the second place the view involves that when, or rather so far as, we act from a sense of obligation, we have no purpose or end. By a 'purpose' or 'end' we really mean something the existence of which we desire, and desire of the existence of which leads us to act. Usually our purpose is something which the act will originate, as when we turn round in order to look at a picture. But it may be the action itself, *i.e.*, the origination of something, as when we hit a golf ball into a hole or kill some one out of revenge.[1] Now if by a purpose we mean something the existence of which we desire and desire for which leads us to act, then plainly so

the problem of how we ought to act in the presence of conflicting obligations is insoluble.

To the first I should reply:—

(*a*) That the appreciation of an obligation is, of course, only possible for a developed moral being, and that different degrees of development are possible.

(*b*) That the failure to recognise some particular obligation is usually due to the fact that, owing to a lack of thoughtfulness, what I have called the preliminaries to this recognition are incomplete.

(*c*) That the view put forward is consistent with the admission that, owing to a lack of thoughtfulness, even the best men are blind to many of their obligations, and that in the end our obligations are seen to be co-extensive with almost the whole of our life.

To the second objection I should reply that obligation admits of degrees, and that where obligations conflict, the decision of what we ought to do turns not on the question "Which of the alternative courses of action will originate the greater good?" but on the question "Which is the greater obligation?"

[1] It is no objection to urge that an action cannot be its own purpose, since the purpose of something cannot be the thing itself. For, speaking strictly, the purpose is not the *action's* purpose but *our* purpose, and there is no contradiction in holding that our purpose in acting may be the action.

far as we act from a sense of obligation, we have no purpose, consisting either in the action itself or in anything which it will produce. This is so obvious that it scarcely seems worth pointing out. But I do so for two reasons. (1) If we fail to scrutinise the meaning of the terms 'end' and 'purpose,' we are apt to assume uncritically that all deliberate action, *i.e.*, action proper, must have a purpose; we then become puzzled both when we look for the purpose of an action done from a sense of obligation, and also when we try to apply to such an action the distinction of means and end, the truth all the time being that since there is no end, there is no means either. (2) The attempt to base the sense of obligation on the recognition of the goodness of something is really an attempt to find a purpose in a moral action in the shape of something good which, as good, we want. And the expectation that the goodness of something underlies an obligation disappears as soon as we cease to look for a purpose.

The thesis, however, that, so far as we act from a sense of obligation, we have no purpose must not be misunderstood. It must not be taken either to mean or to imply that so far as we so act we have no *motive*. No doubt in ordinary speech the words 'motive' and 'purpose' are usually treated as correlatives, 'motive' standing for the desire which induces us to act, and 'purpose' standing for the object of this desire. But this is only because, when we are looking for the motive of some action, say some crime, we are usually presupposing that the act in question is prompted by a desire and not by the sense of obligation. At bottom, however, we mean by a motive what moves us to act; a sense of obligation does sometimes move us to act; and in our ordinary consciousness we should not hesitate to allow that the action we were considering might have had as its motive a sense of obligation. Desire and the sense of obligation are co-ordinate forms or species of motive.

In the third place, if the view put forward be right, we must sharply distinguish morality and virtue as independent, though related, species of goodness, neither being an aspect of something of which the other is an aspect, nor again a form or species of the other, nor again something deducible from the other; and we must at the same time allow that it is possible to do the same act either virtuously or morally or in both ways at once. And surely this is true. An act, to be virtuous, must, as Aristotle saw, be done willingly or with pleasure; as such it is just not done from a sense of obligation but from some desire which is intrinsically good, as arising from some intrinsically good emotion. Thus in an

act of generosity the motive is the desire to help another arising from sympathy with that other; in an act which is courageous and no more, *i.e.* in an act which is not at the same time an act of public spirit or family affection or the like, we prevent ourselves from being dominated by a feeling of terror, desiring to do so from a sense of shame at being terrified. The goodness of such an act is different from the goodness of an act to which we apply the term moral in the strict and narrow sense, *viz.* an act done from a sense of obligation. Its goodness lies in the intrinsic goodness of the emotion and the consequent desire under which we act, the goodness of this motive being different from the goodness of the moral motive proper, *viz.*, the sense of duty or obligation. Nevertheless, at any rate in certain cases, an act can be done either virtuously or morally or in both ways at once. It is possible to repay a benefit either from desire to repay it or from the feeling that we ought to do so or from both motives combined. A doctor may tend his patients either from a desire arising out of interest in his patients or in the exercise of skill or from a sense of duty, or from a desire and a sense of duty combined. Further, although we recognise that in each case the act possesses an intrinsic goodness, we regard that action as the best in which both motives are combined; in other words, we regard as the really best man the man in whom virtue and morality are united.

It may be objected that the distinction between the two kinds of motive is untenable on the ground that the *desire* to repay a benefit, for example, is only the manifestation of that which manifests itself as the *sense of obligation* to repay whenever we think of something in the action which is other than the repayment and which we should not like, such as the loss or pain involved. Yet the distinction can, I think, easily be shown to be tenable. For, in the analogous case of revenge, the desire to return the injury and the sense that we ought not to do so, leading, as they do, in opposite directions, are plainly distinct; and the obviousness of the distinction here seems to remove any difficulty in admitting the existence of a parallel distinction between the desire to return a benefit and the sense that we ought to return it.[1]

[1] This sharp distinction of virtue and morality as co-ordinate and independent forms of goodness will explain a fact which otherwise it is difficult to account for. If we turn from books on Moral Philosophy to any vivid account of human life and action such as we find in Shakespeare, nothing strikes us more than the comparative remoteness of the discussions of Moral Philosophy from the facts of actual life. Is not this largely because, while Moral Philosophy has, quite rightly, concentrated its attention on the fact of obligation, in the case of many of those whom we

Further the view implies that an obligation can no more be based on or derived from a virtue than a virtue can be derived from an obligation, in which latter case a virtue would consist in carrying out an obligation. And the implication is surely true and important. Take the case of courage. It is untrue to urge that, since courage is a virtue, we ought to act courageously. It is and must be untrue, because, as we see in the end, to feel an obligation to act courageously would involve a contradiction. For, as I have urged before, we can only feel an obligation to *act;* we cannot feel an obligation to *act from a certain desire*, in this case the desire to conquer one's feelings of terror arising from the sense of shame which they arouse. Moreover, if the sense of obligation to act in a particular way leads to an action, the action will be an action done from a sense of obligation, and therefore not, if the above analysis of virtue be right, an act of courage.

The mistake of supposing that there can be an obligation to act courageously seems to arise from two causes. In the first place, there is often an obligation to do that which involves the conquering or controlling our fear in the doing of it, *e.g.*, the obligation to walk along the side of a precipice to fetch a doctor for a member of our family. Here the acting on the obligation is externally, though only externally, the same as an act of courage proper. In the second place there is an obligation to acquire courage, *i.e.*, to do such things as will enable us afterwards to act courageously, and this may be mistaken for an obligation to act courageously. The same considerations can, of course, be applied, *mutatis mutandis*, to the other virtues.

The fact, if it be a fact, that virtue is no basis for morality will explain what otherwise it is difficult to account for, *viz.*, the extreme sense of dissatisfaction produced by a close reading of Aristotle's *Ethics*. Why is the *Ethics* so disappointing? Not, I think, because it really answers two radically different questions as if they were one: (1) "What is the happy life?" (2) "What is the virtuous life?" It is, rather, because Aristotle does not do what we as Moral Philosophers want him to do, *viz.*, to convince us that we really ought to do what in our non-reflective consciousness we have hitherto believed we ought to do, or, if not, to tell us what, if any, are the other things which we really ought to do, and to prove to us that he is right. Now, if what I have just been contending

admire most and whose lives are of the greatest interest, the sense of obligation, though it may be an important, is not a dominating factor in their lives?

is true, a systematic account of the virtuous character cannot possibly satisfy this demand. At best it can only make clear to us the details of one of our obligations, *viz.*, the obligation to make ourselves better men; but the achievement of this does not help us to discover what we ought to do in life as a whole and why; to think that it did would be to think that our only business in life was self-improvement. Hence it is not surprising that Aristotle's account of the good man strikes us as almost wholly of academic value, with little relation to our real demand, which is formulated in Plato's words: *οὐ γὰρ περὶ τοῦ ἐπιτύχοντος ὁ λόγος, ἀλλὰ περὶ τοῦ ὅντινα τρόπον χρὴ ζῆν.*

I am not, of course, *criticising* Aristotle for failing to satisfy this demand, except so far as here and there he leads us to think that he intends to satisfy it. For my main contention is that the demand cannot be satisfied and cannot be satisfied because it is illegitimate. Thus we are brought to the question: "Is there really such a thing as Moral Philosophy, and, if there is, in what sense?"

We should first consider the parallel case—as it appears to be—of the Theory of Knowledge. As I urged before, at some time or other in the history of all of us, if we are thoughtful, the frequency of our own and of others' mistakes is bound to lead to the reflexion that possibly we and others have *always* been mistaken in consequence of some radical defect of our faculties. In consequence certain things which previously we should have said without hesitation that we *knew*, as, *e.g.*, that $4 \times 7 = 28$, become subject to doubt; we become able only to say that we thought we knew these things. We inevitably go on to look for some general procedure by which we can ascertain that a given condition of mind is really one of knowledge. And this involves the search for a criterion of knowledge, *i.e.* for a principle by applying which we can settle that a given state of mind is really knowledge. The search for this criterion and the application of it, when found, is what is called the Theory of Knowledge. The search implies that instead of its being the fact that the knowledge that A is B is obtained directly by consideration of the nature of A and B, the knowledge that A is B, in the full or complete sense, can only be obtained by first knowing that A is B, and then knowing that we knew it, by applying a criterion, such as Descartes' principle that what we clearly and distinctly conceive is true.

Now it is easy to show that the doubt whether A is B based on this speculative or general ground, could, if genuine, never be set at rest. For if, in order really to know that A is B,

we must first know that we knew it, then really to know that we knew it, we must first know that we knew that we knew it. But—what is more important—it is also easy to show that this doubt is not a genuine doubt but rests on a confusion the exposure of which removes the doubt. For when we *say* we doubt whether our previous condition was one of knowledge, what we *mean*, if we mean anything at all, is that we doubt whether our previous *belief* was *true*, a belief which we should express as the *thinking* that A is B. For in order to doubt whether our previous condition was one of knowledge, we have to think of it not as knowledge but as only belief, and our only question can be "Was this belief true?" But as soon as we see that we are thinking of our previous condition as only one of belief, we see that what we are now doubting is not what we first *said* we were doubting, *viz.*, whether a previous condition of knowledge was really knowledge. Hence, to remove the doubt, it is only necessary to appreciate the real nature of our consciousness in apprehending, *e.g.*, that $7 \times 4 = 28$, and thereby see that it was no mere condition of believing but a condition of knowing, and then to notice that in our subsequent doubt what we are really doubting is not whether this consciousness was really knowledge, but whether a consciousness of another kind, *viz.* a belief that $7 \times 4 = 28$, was true. We thereby see that though a doubt based on speculative grounds is possible, it is not a doubt concerning what we believed the doubt concerned, and that a doubt concerning this latter is impossible.

Two results follow. In the first place, if, as is usually the case, we mean by the 'Theory of Knowledge' the knowledge which supplies the answer to the question "Is what we have hitherto thought knowledge really knowledge?" there is and can be no such thing, and the supposition that there can is simply due to a confusion. There can be no answer to an illegitimate question, except that the question is illegitimate. Nevertheless the question is one which we continue to put until we realise the inevitable immediacy of knowledge. And it is positive knowledge that knowledge is immediate and neither can be, nor needs to be, improved or vindicated by the further knowledge that it was knowledge. This positive knowledge sets at rest the inevitable doubt, and, so far as by the 'Theory of Knowledge' is meant this knowledge, then even though this knowledge be the knowledge that there is no Theory of Knowledge in the former sense, to that extent the Theory of Knowledge exists.

In the second place, suppose we come genuinely to doubt whether, *e.g.*, $7 \times 4 = 28$ owing to a genuine doubt whether

we were right in believing yesterday that $7 \times 4 = 28$, a doubt which can in fact only arise if we have lost our hold of, *i.e.* no longer remember, the real nature of our consciousness of yesterday, and so think of it as consisting in believing. Plainly, the only remedy is to do the sum again. Or, to put the matter generally, if we do come to doubt whether it is true that A is B, as we once thought, the remedy lies not in any process of reflexion but in such a reconsideration of the nature of A and B as leads to the knowledge that A is B.

With these considerations in mind, consider the parallel which, as it seems to me, is presented—though with certain differences—by Moral Philosophy. The sense that we ought to do certain things arises in our unreflective consciousness, being an activity of moral thinking occasioned by the various situations in which we find ourselves. At this stage our attitude to these obligations is one of unquestioning confidence. But inevitably the appreciation of the degree to which the execution of these obligations is contrary to our interest raises the doubt whether after all these obligations are really obligatory, *i.e.*, whether our sense that we ought not to do certain things is not illusion. We then want to have it *proved* to us that we ought to do so, *i.e.*, to be convinced of this by a process which, as an argument, is different in kind from our original and unreflective appreciation of it. This demand is, as I have argued, illegitimate.

Hence in the first place, if, as is almost universally the case, by Moral Philosophy is meant the knowledge which would satisfy this demand, there is no such knowledge, and all attempts to attain it are doomed to failure because they rest on a mistake, the mistake of supposing the possibility of proving what can only be apprehended directly by an act of moral thinking. Nevertheless the demand, though illegitimate, is inevitable until we have carried the process of reflexion far enough to realise the self-evidence of our obligations, *i.e.*, the immediacy of our apprehension of them. This realisation of their self-evidence is positive knowledge, and so far, and so far only, as the term Moral Philosophy is confined to this knowledge and to the knowledge of the parallel immediacy of the apprehension of the goodness of the various virtues and of good dispositions generally, is there such a thing as Moral Philosophy. But since this knowledge may allay doubts which often affect the whole conduct of life, it is, though not extensive, important and even vitally important.

In the second place, suppose we come genuinely to doubt whether we ought, for example, to pay our debts owing to a genuine doubt whether our previous conviction that we

ought to do so is true, a doubt which can, in fact, only arise if we fail to remember the real nature of what we now call our past conviction. The only remedy lies in actual getting into a situation which occasions the obligation, or—if our imagination be strong enough—in imagining ourselves in that situation, and then letting our moral capacities of thinking do their work. Or, to put the matter generally, if we do doubt whether there is really an obligation to originate A in a situation B, the remedy lies not in any process of general thinking, but in getting face to face with a particular instance of the situation B, and then directly appreciating the obligation to originate A in that situation.

III.—THE MEANING OF MYSTICISM AS SEEN THROUGH ITS PSYCHOLOGY.

By William Ernest Hocking.

Metaphysics has all but ceased to draw water from the copious historic well of mysticism; theology with growing conviction warns against it: but to-day psychology begins to come in their place,—first of course simply as an analyst, yet often lingering as something more than an analyst. What psychology inclines to appreciate is not wholly the same as that which the others have first drunk, then tasted, then thrown away. They were naturally interested in mysticism for the sake of its theory or doctrine; and the doctrine which they have thus far got from it has proved unsound beyond defence. It is one of the clear achievements of philosophy to have diagnosed and refuted this negative theory of reality, which crowns as its absolute the vanishing object of an experience approaching perfect immediacy. This work does not need to be done over again. But psychology, looking with a different interest, may find that the whole meaning of mysticism has not been exhausted in this discarded doctrine.

Psychology looks first to the experience and its effects, more or less careless of its objects or lack of objects: sometimes it seems to intimate that the objects make no difference, the essence of religion being in the experience as subjective fact; but without falling into that gratuitous and damnable mistake, we may well believe that for finding the meaning of mysticism psychology has advantages. For where self-expression falters the signs of meaning may still be read in causes and effects. The thread of meaning, often lost to the mystic himself in his ecstatic moment, may at that very moment appear, so to speak, on the reverse of the cloth, as something accomplished in the active disposition of the subject. Self-interpretation has always been a weak point in mysticism: it has never done well to put its speculative foot forward: eloquent in psychology, it is a stammerer in metaphysics. Many of its negative speculations are con-

fessions of theoretic failure parading as dogmatic results. On its noetic side relatively helpless and plastic, mysticism has lived under all religions,—hence with the stamp of various metaphysical conceptions. Have there not been mystics within orthodox Christianity, a religion in no sense a partisan of the 'abstract universal'? We should then be nearer the historic truth, as well as more liberal, to regard mysticism first as an experience, and let its metaphysics come as a resultant, an inference, a presupposition. There is a minimum of theory without which mysticism cannot develop even as an experience,—perhaps this: that God is one, and that it is possible to be one with him. Beyond this minimum, it is a community of experience that unites the mystics rather than any community of explicit doctrine.

But it will be still nearer the truth, I believe, to regard mysticism (primarily) neither as a metaphysics, nor as an experience, but as an art: namely, as the fine art, almost the lost art, of worship. Historically the mystics are those who have carried the common art of worship to the degree of virtuososhiip, they are those who have won eminent experimental knowledge of the way to God. And their technique which is the refinement of worship, often the exaggeration of worship, is at the same time the essence of all worship. In the course of their devotions the mystics report that remarkable experiences have befallen them, and that equally remarkable cognitions have come to them: but these have taken them, as it were, by surprise,—they are by-products of their deeds, not their great ends. The mystic in his own first intention is he who approaches and acknowledges God in an immediate action called worship; and mysticism must be understood by way of this intention.

If this is a true principle of interpretation, it will bring about some revision of what both psychology and metaphysics have hitherto had to say of mysticism. Particularly, it seems to me, would the contribution of psychology be cleared if attention were given first to the motive of the mystic as an active individual, and then only secondarily to the various phenomena of the ecstasy of the mystic as a passive individual. The conception of the 'mystical experience' must widen out, to include its intentional backbone; for the continuity of motive is the only thing that can determine the identity of the experience, and afford a definite ground for separating the abnormal from the normal.[1] And further,

[1] It may be true, and I believe that it is true, that the motive presupposes an experience (in the relatively passive sense), *i.e.*, that the impulse to worship God, whatever that may mean, is due to some per-

in the purpose and motive of the mystic we have the point at which the metaphysical (and ethical) judgment of mysticism naturally joins the work of psychology and completes it. The bold intention of the mystic to establish some immediate conscious relation with the most Real, and his firm belief in his own experience as fulfilling his intention, make it necessary for psychology and epistemology to work closely together in interpreting that experience. A revision in the one must bring about a revision in the other. It is the purpose of this article to contribute a few positive theses, chiefly to the psychology of mysticism, to its metaphysics only by implication. But first I have to record more definitely the ground of my objection to the prevailing metaphysical interpretation.

I.

In recent years no chapter from the metaphysical side has contributed so much to our grasp of mysticism as that of Royce in *The World and the Individual*. It is by no means a treatment which neglects the psychology of the mystic; I doubt whether any writer since Hegel has so powerfully combined in his account of mysticism the psychological and the metaphysical elements. He exhibits it as a doctrine about Reality, but as a doctrine which is at the same time a report of experience. In his refutation of mysticism, however, he is concerned solely with speculative mysticism, which he regards (I think wrongly) as "the truly significant historical mysticism".[1] The experience of the mystic has

ception of God as already in a degree present. The impulse of worship in its more instinctive forms is quite analogous to the quick movement of the mind toward the source of an agreeable or emotionally warming suggestion, to increase it, to lift as much of it as possible out of the region of idea into the region of empirical presence. But as experience may determine motive, so motive in turn develops experience: the two factors are in continuous and instantaneous interaction during the whole movement of consciousness to its culmination, and it is only because the initial experience has a value, *i.e.*, takes to itself a motive, that it has a career in consciousness. What I maintain is only that we cannot understand that career apart from the motive, that our notion of the experience must include it.

Apart from reference to the motive we have an important array of explanatory conceptions for the mystical 'experience': auto-suggestion, irruption of the subconscious, hysteria, annihilation of will and hypertrophy of attention, annihilation of attention and hypertrophy of will, erethism of the imagination, *hypertension de l'energie vitale*, etc., etc. How are we to choose and adjust among these, except by a tacit assumption that we already know what mysticism intends?

[1] *The World and the Individual*, vol. i., p. 144.

no meaning for him except as the goal of that particular type of speculation. And as for the purpose of mysticism (which on Royce's own principles ought to be its defining mark), this purpose is not invoked to explain either the peculiar experience or the peculiar theory. Royce does not appear to distinguish the mystic's motive from the motive of speculation in general, the motive which the mystic has in common with the realist, the motive drawn from the defects of that (wonderfully depicted) "finite situation that sends us all alike looking for true Being". In so far as mystic and realist alike have the intention not alone to find true Being, but to define it, both must be equally condemned by Royce's proof that "Each in the end defines Nothing whatever".[1] But what if the difference between mystic and realist lay precisely in this point: that the purpose of the mystic is not to define anything at all, but to *do* something which by every device he has tried to differentiate from all processes of defining or of speculating. I believe this to be the case; and that the logic of Royce thus passes over his head. The purpose of the mystic lies in the region of the practice of religion; and his essential theoretical message is, that there is a practical cognition of the Absolute which philosophical knowledge necessarily fails to reach. The point of difference between the mystic and all speculators (including the speculative mystics as speculators) seems to me to be this:—

A philosophy does not supply the thinker *ipso facto* either with the incentive to worship or with the power to worship. Thought may perhaps persuade us of God's immediate presence in experience, and yet it leaves us empty of the idea of 'approach'; it may even exclude such idea (for how can one who is universal be either approached or fled from?). Philosophy finds its Real in the third person, not in the second: it ends in the announcement, "Lo, he is there," not in the address, "Lo, Thou art here". Before that presence, we, as philosophers, stand dumb and awkward,—we have nothing to say. The mystic is he who, finishing his philosophy, or more frequently, anticipating its conclusion, breaks through the film of objectivity involved in the theoretical relation and adopts toward his God the *vocative case*. In that new relation lies all that is distinctive of mysticism.

The possibility of such a relation must of course be provided for also by our philosophy,—or rejected: and especially the possibility, in any such momentary act, of gaining a

[1] *Op. cit.*, p. 180.

knowledge of the Real,—a knowledge which outruns reason, and presents to the subject, prophetically and in an infinite synthesis, the Whole, as in its heart it is. It is to this point that pertinent attack must be directed. In the meantime the mystic, as a rule, does not try to explain *how* these things can be. He calls us to witness that they are so, and are plentifully illustrated in experience. We know well enough the difference in ordinary relations between the realist and the mystic, between the observer of life, and the sharer of it. We know the man to whom Nature, for instance, is a foreign and independent spectacle, and the man who in the presence of Nature readily becomes a part of it. We know the man who in all social situations maintains some fine insulation, some predominance of the self-preserving instinct; and we know the man whose self spontaneously diffuses and mingles with each situation, by some natural osmosis between him and his object. And we know further, that while the former type, the realist in Royce's sense, has a certain advantage in discoursing about his world; the latter type, the mystic, with all his speechlessness has a mode of knowledge of his world, usually of a practical nature, which the less adventurous realist may fail to reach or to understand; a type of knowledge which exhibits also certain anticipatory and creative qualities.

Mysticism as a practical attitude, while it involves cognition, is thus apparently different from discursive thought; it has some priority, even as a means of cognition, over the philosophic accomplishment *at any time accessible;* it seems to effect a *rapport* between the individual and his object in its integrity, and thus to look toward its future as well as toward its past: but in any case the defining mark of mysticism lies in this other-than-theoretical relation to the object, this quasi-destruction of objectivity seen quite simply in the conscious transition from 'he' to 'thou'.

It is one thing to point out and illustrate the mystical relation; to analyse it is more difficult. It seems to be a kind of primitive, total apprehension introduced into the region of social and spiritual realities.[1] It seems to apply to reason's own world some more instantaneous equivalent of reason, taken from the resource of the moral man. In

[1] Royce's often-quoted phrase which describes the mystic as the "thorough-going empiricist" is strikingly true of the mystic's method of knowing; but the mystic's peculiarity is that he applies this method to objects which empiricists generally insist *cannot be given* in any such immediate, unreasoned manner, namely to totals—not to elements; to souls—not to sensations; to resultants (like 'history' or 'society') not to factors; and, finally, to God himself.

the attempt to characterise mystical experience, one naturally falls upon such words as "unitary," "total," "immediate"; and then since it is after all unique and fundamental to consciousness, one insists that it is not wholly describable. I am not now interested in pursuing this analysis. What I want to point out is, that these words, unitary, immediate, ineffable, which at all events apply to the mystic's *experience*, are precisely the words which the metaphysician applies to the mystic's *doctrine*. And I suggest that the misinterpretation of mysticism here in question is due to the fact that *what is a psychological report* (and a true one) *is taken as a metaphysical statement* (and a false one). From the fact that one's experience of God has been "one, immediate, and ineffable," it does not follow that God himself is merely "one, immediate, and ineffable,"—and so a Being wholly removed from all concrete reality. It is true that this inference from the nature of the experience to the nature of its object is here of the closest order; and it is also true that many a mystic has committed himself to that inference. But it is possible, and necessary, to reject it. Let me attempt to show this

If the experience is one, its object is one. True: for the unity of an experience is a unity of attention, and unity of attention implies some kind of unity in its object. And so reality must have for knowledge some unitary handle if a unitary experience of it is possible. It must have something like a 'self,' in which it is all represented or *resumed*, so that in the presence of that self we are, for our purposes, in presence of the whole. One's purposes might be satisfied if reality could be resumed in an 'essence' or in a 'formula'; but most mystics either assume or know that reality is resumed in a self of more concrete description. Now while such unity is indeed implied, the mystic is not concerned either to deny or to explain any plurality that may be compatible therewith. An 'immediacy' does not legislate about what is beyond itself either to deny it or to affirm it. Reality may have innumerable branches and growing tips; any such variety is for the moment simply undetermined and out of mind.

If the experience is ineffable, the object is ineffable. True: for every unity, in so far as it is unique, is ineffable: the One has always to be expounded by what it is not,—the many, the singular by the general. A certain formal ineffableness belongs therefore to the object of every unitary experience. But unities, we have just seen, are various in kind and degree. And in so far as the unity of the object has its *kind*, the object escapes from the ineffableness which may still

cleave to the experience. Probably all experience in its immediate quality is incommunicable; but the arts of communication draw infinite material from the region nearer and nearer the heart of this immediacy. Immediacy and idea are not disparate stuff, they are different stages of the same stuff, the same meaning: and the individuals historically most active and fertile in this ideal exploitation of immediacy are none but the poets and mystics themselves. Have the Christian mystics ever refrained from trying to coin their experiences. their 'revelations,' into Latin or Spanish or German? Can we forget the bulky manuscripts of Boehme (who tells us that he spent twelve years in bringing to pen the burden of two such 'ineffable' experiences), or the voluble recitements of Teresa? Consider the state of mind of Angèle de Foligno, of whom it is said that while dictating his revelations to his amanuensis he would frequently break off, crying: "I blaspheme, brother, I blaspheme. All that I have said is nothing;—and there is nothing that I can say,"—and then continue his dictation. Here is no simple ineffableness, but a very double state of mind: a mighty difficulty in expression, together with an even mightier impulse to express. As far, then, as the content of mystical experience is concerned, the word ineffable may often tell but half the truth, and a temporary half-truth, or again, it may wholly apply to that content; but in its first intention it is an expression of psychological difficulty, not rashly to be crystallised into metaphysical doctrine: the two questions are separable.

I judge, then, that the metaphysics of mysticism (for it most certainly has a metaphysics) may be richer and freer than we have been accustomed to think; and that the marks commonly attributed to the mystic absolute are in the first place so many contributions to mystic psychology. I may now turn to consider that psychology on its own ground.

II.

The work of William James is the natural point of departure. For *The Varieties of Religious Experience* is very largely a treatise on religion in its mystical aspect, that is, as unreasoned personal intercourse with unseen reality.[1]

[1] Every treatment of the psychology of religion tends for obvious reasons to become a psychology of mysticism; and there were further reasons in James's own temperament why this should be markedly the case with his own work. His interest was held by everything individual, original, and instinctive, especially if it tended to sway away from the

James's main interest is not in explaining religious experience, but in proposing canons for judging it on the basis of its effects: hence his analyses may be broad and summary. Of mystical experience he says simply that it is ineffable and noetic, usually also transient and passive.[1] In adopting the hypothesis of the subconscious as the immediate seat of the activity before which the mystic is passive, he appeals to it only as "a mediating term," as indicating the direction for further research, not as a finished result. Thus he gives the conception, I think, its right place and proportion: for the subconscious is still more in need of illumination than in a position to give it. Whatever else is done toward the psychological interpretation of religious experience is shedding light on the problem of the subconscious; hence I may the more willingly forgo, as I must, any detailed reference to it in this paper. I shall consider first what has been added and is still to be added to James's account of mystical experience, simply as a psychological event; and then, secondly, come to the question of the motive of mysticism.

What James has spoken of as the transiency of the mystical experience may be brought under a wider category,—that of rhythm, or of the alternation of states. That is, the mystic's elevation may be transient *because* it is a phase in an organic wave or sequence of some sort: and if so, it would be of decided advantage to study such wave or sequence in its totality. Any rhythmic movement in experience confesses an organic bond, indicates a causal law, and brings the fact at once within the field of the psycho-physical, offering perhaps the most favourable angle for scientific approach. Suggestions have never been lacking that the mystic's intense experiences are concomitant with certain physiological ups-and-downs, more or less vaguely defined; but the scientific development of these suggestions has been for the first time really begun by recent French students, notably Delacroix and De Montmorand.

The mystic himself is keenly conscious that with the entrance of these experiences his life is bound in a remarkable alternation: but he might well object at the outset to the theory conveyed in the idea of rhythm. For what is this elevation if not the moment of freedom from all ties of

institutional, and to renounce the support of reasons: hence he naturally finds in his net those who make their private way to God, and reach an empirical assurance of their soul's security, apart from the sanction of authority. These are mystics; and this original, untamed, God-seeking element is the mystical element in every religious nature.

[1] *Varieties*, pp. 380-381.

nature? Has he not in his preparation painfully put off these ties, so far as his human will could carry him, and has not the divine power finished the work which he himself could not accomplish? In short, is it not essential to the internal meaning of mysticism that this moment shall be regarded as a moment of just that absolute freedom which the psychologist cannot find anywhere else in nature? I bring up this question in order to point out that quite within the meaning of the mystic there are certain indications that the idea of rhythm need not be so alien thereto as it at first seems. In the first place, he has no positive reason derived from this meaning why his moment of union should pass, and is himself inclined to attribute this transiency to the weakness of nature. Then, again, even in the upward movement, there is a certain justice upon which the mystic depends, which blends with and gives regularity to the grace of God there found. The logic of the relation between the worshipper and his God is indeed wholly personal and particular (not magical), but the worshipper still relies upon a steadfastness in the Being worshipped; he frequently comes to look upon his elevation as a response to the right approach on his part, as some function of the moral condition of his own heart. The words of Plotinus in his letter to Flaccus seem to show well this quasi-natural adjustment of attitude to the supernatural. "But this sublime condition," he writes, "is not of permanent duration. It is only now and then that we can enjoy this elevation (mercifully made possible for us) above the limits of the body and the world. I myself have realised it but three times as yet. . . . All that tends to purify and elevate the mind will assist you in this attainment, and facilitate the approach and the recurrence of these happy intervals."[1] Thus the mystic himself is often disposed to read his experience as a course of interaction between a higher and a lower law. And it is noteworthy that while many a mystic has expressed regret that his joy could not endure, not one (so far as I have found) has expressed surprise. This surprising absence of surprise may indicate that the immediacy of the state is never so complete as to be wholly without fringes,—that some awareness of the empirical self and of its ties remains. The mystic has found himself in a region where the gravitation of earth operates but slowly; but that it still operates and must claim its own, he himself seems by this silent confession to be aware. So much by way of helping the adjustment of internal meaning to the attempts of psycho-physical explanation.

[1] **Translated by Vaughan, in *Hours with the Mystics*, vol. i., p. 81.**

It is of course clear that no rhythm of a wholly simple outline exists in this case. Hence those who look for the ground swell of the wave of mystic exaltation in some flux of that subtle quantum once called animal spirits, later, vital tone, and now coenesthesia, solve the problem too easily.[1] There are two plain reasons for regarding variations of this type as external to the matter in hand.

First, the irregularity of the experiences in question, the absence of anything like periodicity in their occurrence. Since mystical experience ordinarily presupposes an initial act of will, and often an extended moral preparation, our theory must at least show how the rhythm appealed to involves the history of the worshipper's conscience. The internal logic of the event is so far personal that its external shape must be that of a history rather than that of a process, the semblance of periodicity obscured or lost in the movement of the individual will. This means simply that if there is any psycho-physical circuit concerned it must be one in which the 'will' is interpolated as it is in the circuit of nutrition; it must be one which has as one segment a free connexion with the whole system of higher centres. And the analogy of the circuit of nutrition, which does indeed require an interposed voluntary undertaking, is still too restricted; for it is no matter of life and death to the individual that his mystical cravings, if he has them, should be satisfied regularly, or ever. In this respect the movement of mystical life would more resemble the irregular curve of the life of sex; and, still more, the movement of those love-like hungers, for beauty, for society, for solitude, and the like,

[1] Thus Godfernaux and Murisier, both writing in 1902, propose that the changes of organic sensation, coenesthesia, variable in all persons, become in the mystic a more pronounced oscillation. Godfernaux regards this as the explanation of all religious feeling: "Cette oscillation constante du ton vital est bien, semble-t-il, l'aspect physiologique propre du sentiment religieux". The mystic experience he regards as simply an overflow of ordinary religious sentiment: "quiconque éprouve le sentiment religieux est un extatique à quelque degré" (*Revue Philosophique*, vol. 53 (1902, i.), pp. 162, 164. Murisier writing under the title, "Les maladies du sentiment religieux," after pointing likewise to the "instability of organic sensation," adds the explanation that the marked phenomena of mysticism may be occasioned by the energetic pursuit of a moral ideal on the part of persons weak in objective attachment, in observation and generalisation. We are not much advanced by these suggestions. Maine de Biran, referring to his own experiences of mystical type, had already proposed in substance the same theory, appealing to "organic instability, the rhythm of the affective life, the alternatives of excitement and depression". No one doubts the influence of these variations, but it has become clear to us that such accounts touch only the accidents of the mystic's career.

toward all of which, although some over-individual life may be vitally concerned, the individual may hold himself quite free.

Second, there is no depression so far as 'vital tone' is concerned which corresponds in constancy and prominence to the elevation. The elevation is not in this sense above-normal that it must be compensated by a corresponding below-normal. On the contrary the elevation presents certain claims to be, as it were, another normal; some of its elements, for instance, tend to become permanent characters of consciousness, which could not be the case if they were simply extremes or 'hyper-tensions'. This is the point well made by Delacroix, when in commenting on the theory of Maine de Biran he says: "*A la rigeur*, the alternative of excitement and depression may be able to explain, and does explain in part, those conditions of enfeeblement, sadness, horror of self, which generally succeed the period of ecstasy among the mystics; it may explain also those passing 'aridities' which trouble the expansive beginnings of the mystic's life, aridities which the mystics signalise but which are lost in the expansion they for the moment interrupt. But it must never be forgotten that in the group of mystics here studied (Teresa, Guyon, Suso, and others) the last period of their career, wholly expansive, one of exaltation and activity, seems final. The systematisation of mysticism is more complicated than this elementary rhythm."[1]

This consideration seems to Delacroix to relegate not only the theory before us, but also the phenomena of marked alternation in the early life of the mystic, to a position of unimportance. This alternation is in his eyes something to be overcome, and the process of overcoming it throws the career of the mystic into a rhythm of wider scope, a secular rhythm as it were, which takes the form of a threefold division of the mystic's life-journey. This threefold movement may be sketched as follows:—

First, when the way to God has actually been found, there is a period of facility and success, in which the God sought is found with relative ease, the divine 'favours' are abundant. This is a period of comparative uselessness to the outer world, of absorption in the interests and excitements of the new level of life, of experiment and progress, of penetrating through the vestibule into the very interior of the temple. This period covers all the four stages recounted by Teresa in her Life (not in her later writings), which to Delacroix

[1] *Étude d'histoire et de psychologie du mysticisme* (Paris, 1908), p. 415.

are simply arbitrary divisions in one progressive process of 'divine hypnosis': it is the period of 'expansion' above referred to. The second period is prepared by the defects of the first. For into the mystic's motive in this first period there enters, almost inevitably, some self-indulgence, a tendency to exploit the divine goodness, to seek spiritual gratification as a personal luxury, and to take pride in the signs of special divine favour. Whatever these tendencies, they are burned away in the second period, which is a time of 'aridity' in which the same apparent dutifulness and devotion bring no reward or token of approval. Many of the major mystics describe such a time of infinite misery, within which ecstatic seizures may indeed occur, but then they are ecstasies of torture. These are paradoxical states, thinks Delacroix, in which God is given as absent, *i.e.*, God addresses the soul but makes it conscious of the obstacles to union, so that often the soul desires death as a means of completing the flight held in agonised suspense. In brief the time has come in which the mystic must either retreat from his undertaking or overcome the fault in his own understanding of its nature. That error, as Delacroix conceives it, is in substance the false relation of sunderedness, accepted and even fostered by the mystic in his first enthusiasm, between the state of elevation and the level of ordinary experience. Hence the third stage abolishes that alternation: and in the 'spiritual marriage' there is a continuous possession of the ordinary life by the consciousness of God without fitfulness, or extraordinary seizures or the hampering of functions. It is a period of serene and powerful activity: the subject so far from being rendered useless by his mysticism is planted in the midst of affairs with immensely enhanced energy and effectiveness, as the lives of the persons studied bear witness. For Delacroix, then, the mystical experience has the character of a dialectical process, with thesis, antithesis, and synthesis, in whose last term a condition still typically mystical is free from those heights and depths, those interruptions and disturbances, which mark the earlier stages of the experience.

The work of Delacroix is in the highest degree masterly, and admirable in its union of sympathetic understanding with critical rigour. To my mind, however, he has mistaken the nature of the minor rhythm, and is thus in some danger of eliminating what is characteristic of mysticism. I should agree with Delacroix that the pathological fluctuations often associated with mystical experience are not essential parts of it; but I should not agree that the elementary alternation is essentially pathological, or that it is

ever overcome. For whatever the psychological phenomena associated with mystical experience may be, the thread upon which they are hung is—as I must insist—the mystic's intention; and if that intention is at all fairly conceived as an intention to worship, it involves an occupation of attention which in the nature of the case must alternate with attention to other affairs. I am driven therefore, in the search for a psychology of mysticism, to look for further analogies among those normal alternations such as sleeping and waking, work and recreation, competition and co-operation, the hungers and satisfactions already referred to, conception and gestation, etc. In this respect, De Montmorand seems to me nearer the truth than any other writer. He points out[1] that there are alternations in experience whose members are not simply antithetical and successive, but normally and even causally related to one another, as repose grows out of action, and action out of repose; and suggests that this may be true of mysticism also. The fact upon which Delacroix' argument is based, that much of the early elevation is built upon the later level of continuous living, may be interpreted, for instance, as analogous in no very far-fetched manner to the assimilation of a meal. The experience seems in fact to have supplied the subject with a certain moral fuel. His inability to bring its content to immediate expression is to be understood in part by the fact that this supply is still relatively external to him, and requires a certain time to be made his own. And that something like assimilation has taken place may be seen in the fact that the mystic is actually slowly made over by his experiences, and that many an one by dint of perseverance succeeds in formulating the meaning of his acquired insight and in communicating it. Rhythm of this type would then last at any rate as long as the subject continues to grow. Even approximate continuity is a sign of old age in mysticism, just as the gradual obliteration of the sharp rhythm of sleep

[1] In *Revue Philosophique*, vol. lvii. (1904, i.), pp. 261-262, in the course of an article on "Asceticisme et Mysticisme". His words deserve quotation. In reply to those who accuse the mystic of anti-social tendencies: "C'est qu'ils n'ont pas approfondi la notion d'alternance et n'en ont pas dégagé tout le contenu. Elle implique, en même temps qu'une opposition, un rapport de cause à effet. Le sommeil alterne avec le veille, l'hiver avec l'été, l'action avec le repos. Entendons par là que le sommeil prépare le veille, que l'été sort de l'hiver,—que l'action *naît* du repos et ne le suit pas seulement. La légende et l'histoire nous montrent tous leurs grands hommes se recueillant dans la solitude et le silence avant d'entrer en lice. . . . Nous avons tous notre grotte de Manrèse, où nous nous retirons à de certaines heures."

and waking is a sign of physiological old age. Alternation lies deep in the nature of things psychical as well as physiological: it is the fundamental method of growth, of the influx of new freedom; and I am inclined to regard the mystical experience as an incident in the attainment of a new psychical level, and one which in various forms and degrees is a manifoldly recurrent event in every person's life. So much for general orientation as to the nature of the rhythm in mystical experience: I believe that it will now be possible by a nearer view of the facts to state with some degree of accuracy the *principle of alternation* here involved.

III.

A radical alternation in consciousness may involve the disconnexion of the two alternate strands one from another, as in the case of sleeping and waking. In the traditional type of ecstasy, the mystic is as thoroughly detached from his waking world as is the sleeper: and there are certain features of this disconnexion which I beg leave to recall, in the hope of catching a glimpse in this pronounced form of the principle of alternation which pervades all mysticism.

In this detachment of the ecstatic from his world there is an interesting union of voluntary and involuntary factors, which closely resembles the case of sleep. It is a part of the mystic's voluntary preparation to evade the insistence of the senses, to withdraw his thoughts and desires from the interests of current living, to enter into solitude and silence, to turn his attention within. In a measure this turning away is usually guided by a positive direction of the mind to some object,—say the passion of Christ,—and is sustained by a lively religious impulse which rather engulfs the other desires than destroys them: to this extent it more resembles the intense and pointed absorption of the abstracted thinker than the willing laxity of the wooer of sleep. But while the rapt thinker may be lost to his surroundings, his 'absence of mind' remains within control, he does not drift beyond the point of recoverable self-direction: the object of the mystic's meditation however becomes a living current which carries him away beyond the reach of life,—he is given over, like the sleeper, to the movement of forces which must run their own course. The period of absence from life is like a temporary loss of life, an obliteration of some elements of complete personality: and as the loss of life in sleep is regarded as a means of keeping it, so the mystic often looks upon his self-abandonment as a paradoxical condition, not

more remarkable t[illegible] sleep, for maintaining his spiritual integrity.

It may be worth while to remark in passing that the idea of mystery connected with what we call mysticism is largely due to this disconnexion rather than to any inherent mysteriousness in the content of the experience. In the historical origins of the word 'mystic,' the thing signified was a certain *social* disconnexion,—the initiate unable to communicate his knowledge to the world, the world unable to make connexions with the initiate. But the underlying fact is psychological: mystery is felt whenever there are two bodies of experience not in perfect communication, quite apart from the question whether the one or the other is inherently wonderful or weird. Mystery does not lie in either of those two bodies alone; it expresses the state of mind of one who *begins to see*, that is, who begins to see one experience in terms of another. It is thus the characteristic quality of any new idea, not wholly naturalised in the mind. The mystic is presented with two experiences neither of which he can doubt; both must be true, and he does not understand *how* both are true. Here for instance is a typical mystical revelation of a mild order, and a typical expression thereof: "How came this creation so magically woven that nothing can do me mischief but myself. . . . If I will stand upright the creation cannot bend me." Here stands Emerson with the weight of appearances against him, sure of creation and sure of his idea, yet confessing that the mode of weaving the two into one fabric is beyond his penetration, and so, 'magical'. From this point of view, the mystic might be defined as the man who is willing to drop one world of assurance while he seizes another, confident that the fabric of the world will harmonise them both. Inability to bring the two experiences together tends, it is true, to cast doubt for a time on the reality of the one and the other; and the religious mystic is one for whom another world has gained such substantiality that the reality of everyday experience has suffered this kind of passing doubt. But even when the doubt passes he remains a mystic so long as the union of one with the other is not perfectly solved.

Having in the last paragraph been using the word mystic in a somewhat loose and generalised fashion, I now return to the mystic in our special sense, the man whose particular dissociation is between the *whole* of the system of things temporal on one side, and on the other the heart of the eternal, which he hopes to make empirically present to his consciousness. This involves an emphatic separation from

his visible social world as well as from his physical world,—a phase of the matter that needs special mention, because we are not inclined in our time to rate highly any solitary aspect of religious thought or practice, and because there is much in modern times as in ancient times that looks like mass-mysticism. I refer of course to religious dances, dramas, festivals, revivals, in which the white-heat of social consciousness seems to become the generator and sustainer of mystical enthusiasms. But I submit that even in these somewhat tumultuous and disorderly variations of our theme, the mass-consciousness forms the level from which the individual departs: he is not a mystic until his own spirit has made its solitary leap to God, like a tongue of flame out of the midst of the fire. Much of what we call 'social' life moves on a similar principle, that of passing from hand to hand a function which, in any one hand, is a solitary function: each one in turn becomes 'it,' *i.e.*, takes upon himself alone the difficulty in question, learning by his own experience what otherwise he sees only from outside. Whoever helps to sustain any 'social' structure is alone just in so far as he is responsible; and he comes for the most part to his solitary social position through having wrestled with some angel or other in more literal isolation from other human ken. The initiate must go down alone into the grave, though initiation, on the whole, is a social ceremony. And so whether we have in mind an orgy of Dionysus or a meeting of the Society of Friends, it is individual seizure by the spirit which marks the moment of religious success. We do not understand solitude until we see that it can ride on the back of any whirl of sociality however furious: and that its pang may be the more poignant because the utmost limit of common possession has been tested in an immediately preceding moment. He who merely imitates is but a false mystic, for the thing to be imitated is the burst of original impulse; he who is entranced by social suggestion is but a false mystic, for the inner core of all that his environment presses upon him is the violent subdual of the social bond by the superior energy of the divine *rapport*. He alone is utterly unsocial who refuses, when his own watch comes, to go out and meet the absolute in the darkness. Solitude, I say, is the essence of mysticism; and I add the basis of its supreme social importance.

For it is the most dangerous things that are the most important. We of this age have come to fear solitude and with it mysticism, because solitude is the home of stagnant growths and morbid-consciousness, because it is the crown-

ing curse of all vices. We see in it only the danger of losing objectivity, which is indeed its essential peril. But it is the intention, and so the defining character, of the mystic solitude, that its absolute object develops in strength *pari passu* with the entrance into subjectivity. Mysticism, in its true character, is just the redemption of solitude: it is a process which enters one step farther into the heart of our own infinite subjectivity and reclaims it for social service in the form first of a deepened morality and art. If our own age with its growing sociality and immersion in the manifold is little mystical, it is because the power of evaluating solitude, and with it the depth of self-consciousness, is so little developed. And in so far as it has flattened and shallowed out, it is because it has so far lost its mystical instincts. Mysticism, as an identifying of the subjective with the absolute-universal, might be described as an organic cultivation of reason,—though not of the "reason which can (as yet) be reasoned": its fruit is an insight without reasons (without palpable roots in other insights), and without friends. The vital function of mysticism is *origination*, the creation of novelty. Of the two enemies to this pure originality the friends are perhaps more seductive than the reasons. Inevitably then, the blade of the mystic's disconnexion must pass through the whole sheaf of his social ties.

Can we now state the *principle of alternation* in any definite form? Most generally put, it seems to me this: Concrete living is a condition in which we pursue some total good under shapes and by means which are inadequate to it, and so partly false to it. We are from time to time obliged to reject what we have done, to withdraw our forward moving efforts, and revert to the Whole. This necessity is due not simply to the fact of error,—which might conceivably be remedied on the spot by some moving compensation,—but to the type of error: it involves not only our tools, but our empirical selves, the operators. Take the case of intellectual originality. One wishes to know the whole truth,—some unknown truth. The best means to that end are,—reason, and social reason; he who would originate must fill himself as full as possible of science, history, social motives, the whole world: but there comes a moment when these very things, his necessary means, become, as we said, his enemies,—his poisons. This is the moment at which they become *himself*. It is this self which must be withdrawn and reoriented; it must turn its back upon itself, and lose itself in the unknown whole. Every detail of psychical

operation shows this method of action. Attention is a rapidly alternating current, perpetually withdrawn from its object and instantaneously replaced: but in the instant of withdrawal, having recovered a better poise and a steadier termination, having wiped away the film of relativity with which self and object had begun to infect each other. The mystic only does consciously and totally that which we are all continually doing in the minuter movement of psychical life, that which we all resort to in fragmentary and instinctive manner.

Thus, at the bottom of the psychological alternation there lies an epistemological principle, which deserves to be called the Principle of Alternation. It is the counterpart and corrective of the Principle of Relativity. It is not knowledge that is relative, but the act of knowing. It is my concrete historical nature which determines that at any moment I may see but one side of the shield; it is my knowledge of the whole which leads me, by an alternation of position, to repair the defect of my knowing. In all science we recognise the alternate use of categories which are singly imperfect, but mutually corrective. The concept of substance, whether in the form of atom, or of energy, or of soul, may be inadequate for knowledge, but is indispensable for knowing. It is the same with social knowledge. Do I wish to know a person? I must pursue acquaintance in two antithetical directions: I must learn to know him in what he does, at his periphery, in the various expressions of his life that manifest themselves in my temporal world,—and I must also learn to know him by the pursuit of his central 'substance,' by the mystical seizure in intimacy of that unity from which all these plural deeds are deposited. It is by a similar interplay of categories that I must reach a concrete knowledge of my world as a whole: at its periphery, it is 'experience,' 'life,'—at its centre it is 'substance,' 'reality,' 'God'. My total picture of this world is drawn like an artist's sketch: not by a line continuous in the field of vision, but by a series of lines which err and which are broken in their course by reversion to the—undrawn—idea. The plural and visible aspect of things is divine also,—that is, if we are able to see it so. But we need at least to have caught the idea of the original in some experience, in order to flourish with our interpretation. He who knows God at his periphery alone, or through morality and 'social service,' is using but one of a necessary pair of categories. He has what we might call an honourable business acquaintance with his universe. But he has no home.

IV.

In what has already been said about the mystical experience simply as a psychological event, we have been foreshadowing a definition of the mystic's purpose. It only remains to bring this into tangible form. The mystic who knows himself is a mystic, not because he finds his world so bad that he must effect a spiritual retreat from it; but because he finds his world so good that he must perform a spiritual journey to the heart of it. He is not content, nor able, to hammer away at the circumference without sometime catching a glimpse of the moving principle of his labour: and whether or not he can yet grasp that principle in philosophic expression, he can at least grasp it in an experience which is immediate without being irrational. Philosopher or not, he finds that his Reality must be known by alternate exposure to its peripheral and its central aspects, to its moving and its eternal categories; and he finds that in his knowledge of this central Substance, there must be included the empirical element, present also at the periphery. The impulse of worship may thus be understood as an impulse toward *integrity* in one's relation to his absolute: no matter in how many other ways he may know the real and the good, the worshipper desires to complete his relation by knowing them also in immediate individual presence.

On its subjective side, this impulse toward integrity has a twofold character. The mystic is moved by ambition and by love. His ambition is, to perfect himself, to clear his head and to purify his character. This ambition though it impels to the movement of mind we call worship is still touched by a sense of the importance of work, the world's work, as if it were for the sake of those ends that one turned his back upon them, because he must first unify himself. But when the absolute which one approaches is able to drain into its own vortex all the meanings of that work, and so to abolish the independent worth of that work, the zealot becomes the lover. When fear and hope have thus disappeared from the impulse of worship we have mysticism in its purity. It can hardly be better presented than in a simple note in the diary of Tolstoi, whose mystical traits (though he would hardly be called a mystic) are closely allied with his powers of penetrating psychological description:—

"Yesterday," he writes,[1] "I hardly slept all night. Having posted up my diary, I prayed to God. It is impossible to convey the sweetness of the feeling I experienced during

[1] *Life of Tolstoy*, by Aylmer Maude, vol. i., pp. 63-64.

my prayer. I said the prayers I usually repeat by heart, 'Our Father,' 'To the Virgin,' etc., and still remained in prayer. If one defines prayer as a petition or as a thanksgiving, then I did not pray. I desired something supreme and good; but what, I cannot express, though I was clearly conscious of what I wanted. I wished to merge into the Universal Being. I asked him to pardon my crimes; yet, no, I did not ask for that, for I felt that if He had given me this blissful moment, he had pardoned me. I asked, and at the same time felt I had nothing to ask, and that I cannot and do not know how to ask: I thanked Him but not with words or thought. I combined in one feeling both petition and gratitude. Fear quite vanished. I could not have separated any one emotion,—faith, hope, or love,—from the general feeling. No, this was what I experienced yesterday: it was love of God, lofty love, uniting in itself all that is good, excluding all that is bad."

The moving principle of Tolstoi's life at this time was doubtless ambition, taking impulsive shape as a desire to perfect himself and to "test himself," swinging perhaps only in this solitary instance within the circle of mystic worship. But this ambition and this love are closely related to each other. It seems to me true to say that beyond the limits of the mystic experience itself, the love of God *takes on the form of* moral ambition: that these two motives are, so to speak, allotropic forms of the same motive.

It is from this point of view that I would judge the theory of Leuba, who in several well-known articles[1] has done much to supply the lack of a psychology of the mystic's motive. He has rightly distinguished the two sides of this motive. The ambitious element appears to him as a fixed necessity for moral perfection, a "tendency to the universalisation of action," amounting almost to "hyperæsthesia of the moral sensibility," in many historic instances. The element of love appears to him under a very earthly guise, as a need for satisfying the instinctive affections, a need for "organic enjoyment" in which a thwarted human desire finds an ideal route to its satisfaction. The divine love, on this basis, is a form of the pursuit of pleasure; no wonder that it seems to him inconsistent with that other fundamental motive, the moral ambition so often expressed in the severe asceticism of the mystic's self-discipline; no wonder that the mystic's development is read by him as an elimination of Eros, a conquering of love by moral ambition, "a reconstruction of the

[1] *Revue Philosophique*, vol. 54 (1902, ii.), pp. 1 ff., 441 ff.; 57 (1904, i.), p. 70. Mind, N.S., vol. 14 (1905), pp. 15-27.

individual under the influence of the disposition toward universalised action, wherein he may reach entire deliverance from the desires of the natural man". I cannot but believe that this alleged incompatibility has been created by Leuba himself, through the view he takes of the nature of the divine love.

At the same time, Leuba is fundamentally right in recording the contrast between these two motives; incompatible they are not, but antithetical they assuredly are. And it is easy for the antithesis to become an antagonism. On the organic level, love and ambition look in opposite directions. The element of love may make its beginnings felt in the midst of work as a sense of the aimlessness of work, a questioning of worth-whileness, a feeling of *moral wear-and-tear* in the determined pursuit of things whose value is not wholly convincing, a need for recovering sincerity by spiritual repose: and this desire, still of the same moral stuff that first launched the work, now reverses the direction of action, and turns naturally to 'pleasure,' as a thing convincing without effort, especially to companionship and the friendship of the sexes. Practically, one turns away from work; and the motive which is at bottom a moral demand for the renewal of worth may easily be taken for a denial of worth: love, ignoring its own nature as transmuted ambition, enters into false competition with duty. And duty may respond by forgetting that it is nothing but transmuted love.

This is true in things total as in things partial: hence it entangles the mystic as well as other men. It is true that the love of God may become a path of dissipation, antagonising moral ambition: but it is not true that this is its natural character. We are bound to define the motive of mysticism by its normal condition, if it has one,—even though this normal condition had never yet been realised. And we are still more bound to give the mystics credit for their best achievements, and for their deepest discriminations. No one who reads the mystics can suppose that they have been unaware of precisely this danger; nor that they have been undiligent in guarding against it. They have seen and exactly stated the truth that the highest possibilities of experience are also the most perilous. Let me quote a passage from Tauler on this point:—

"There are those who have lost their way in the spiritual life, because they have undertaken to live this life after their own conceit, without the direction of God. They have indeed a desire to taste inward spiritual comfort, but this desire (not wholly freed from subjectivity) becomes in them

a veritable spiritual unchastity: for it is nothing other than a natural inclination or love which is bent and crooked inward into itself, seeking in reality its own comfortableness.

"Outwardly these two types of love, the natural and the divine, are as like as two hairs of the head; but in their inward meaning they are wholly alien. For the true lover of God offers himself up wholly, together with everything he has, and is capable of, and cannot tolerate the thought of any other appeasement of his longing than that ineffable Good, which is God himself. The others fix their minds upon the blessings and sweets which they demand from God, and if they fail to get them they are beside themselves with impatience and violent clamour. What they desire is a type of rest and comfort naturally pleasing to all creatures: and such an experience is possible to any person who only knows the art of emptying himself of imaginations and impulses. Let a man but separate himself from all contingencies and from all works, and there will come over him in this state of emptiness a piece which is very great, lovely, and agreeable, and which is in itself no sin since it is a part of our human nature. But when it is taken for a veritable possessing of God, or unity with God, then it is a sin; for it is in reality nothing but a state of thorough passivity and apathy untouched by the power from on high, which any man can attain without special grace of God. It is a purely negative state from which (if one in arrogance calls it divine) nothing follows but blindness, failure of understanding, and a disinclination to be governed by the rules of ordinary righteousness." [1]

It has never been easy for human nature to sustain its love at the level of true worship; it has never been easy to keep integrity in presence of that seductive movement of reflexion which seizes upon an experience and forgets its first intention; there is a statistical certainty of lapse, and this, if Delacroix is right, necessitates the long agonies of the second stadium of the mystic's life-cycle. The important point for a fair scientific theory is: that mysticism has its own corrective within itself. It recurs to the essential identity of its love and its ambition.

To know that the love of God is of the same substance with moral ambition decides some questions about the psychological nature of that love. But it does not decide the worth of Leuba's thesis that it has close psychological kinship with the love of man and woman. It would be necessary

[1] Freely taken from Predigten, ii., pp. 235-239.

in a complete theory to show the wide differences of these two loves as well as their striking likenesses; but there is no greater scientific service than to define with accuracy the extent of this likeness so universally recognised in literature and history. To my mind this can only be done with the aid of the principle of alternation. Beyond doubt the mystic exaltation sweeps up into its current whatever in the thousand-fold alternate swingings of human nature moves in its own direction,—not, however, as their product but as their master. It would indeed be surprising if the sexual nature of man, with its movement away from the sphere of deeds to the sphere of substance, with its strong tide toward the over-individual and racial, with its suggestion of total, infinite, and yet immediate worth, did *not* more quickly and completely than any other human impulse discover in worship its ultimate meaning and law. And this, not because the love of God is at bottom sexual love, but because sexual love is potentially love of the divine. As to the details of Leuba's theory, I leave them to be dealt with by his competent critic, De Montmorand.[1] But the main criticism to be passed upon that theory is only that it is not the whole truth; and that in this case anything short of the whole truth is untrue.

The whole truth lies in this direction,—that *all* of our human impulses and loves, are akin. And the psychology of mysticism waits less for an analysis of the love of God than for an analysis of all other human desires. It is not this love, but those that need explanation. The love of God is the one natural instinct of man: worship is the one deed which answers as an echo all other deeds of history. Upon one point the psychologies of Plato, Augustine and Spinoza are agreed: that all special desires are refracted desires for the absolute good. We moderns with superior analysis have not yet regained in our own tongue these results. We need to know the 'laws of transformation and equivalence' of desires and values: then we should see how they may be one and all not suppressed by, but paid-over into, the all-consuming passion of religion. Both Leuba and his critic fall into the error of supposing that in the perfecting of mysticism some side of human nature is put under, some dissociation or amnesia has been accomplished, so that the 'lower centres' never again assert themselves. All this seems foreign to the facts. I like better the theory that in mysticism the needs of sex together with all needs are understood and

[1] *Revue Philosophique*, vol. 56 (1903), pp. 382 ff.; vol. 57 (1904), 242 ff.; vol. 58 (1904), pp. 602 ff.; vol. 60 (1905), pp. 1 ff.

satisfied; that all of the hundred voices of human desire are here brought to unison. With this understanding and not otherwise can I see how religion is to fulfil its assumed functions: To keep from mutual estrangement the primitive in us and the far-civilised. To offer individual souls—malformed in the specialisations of our social order, or mutilated in its accidents—the possibility of complete personality. To unify in wish and will, as reason does in principle, the whole moral existence of man.

Mysticism, as worship, is only a moment of reflux in the movement of living: but in that moment human nature is dissolved and recreated, shattered and remoulded—a little nearer to the heart's desire.

IV.—THE VEDANTIC ABSOLUTE.

By Homo Leone.

The Self in all beings and all beings in the Self,—thus sees the Self-poised with equal vision in all (VI., 29).

By Me of Unmanifest Form this whole world is filled ; all beings are rooted in Me and not I in them (IX., 4).

I am the Atma, O Gudakesa, residing in all creatures ; I am the beginning, the middle and the end of all beings (X., 20).

Then in the Body of the God of Gods did Arjuna see the whole diversely divided world at-one (XI., 13).

Isvara, O Arjuna, is in the hearts of all creatures whirling by His power all beings as if mounted on a wheel (XVIII., 61).

So stand some of the significant verses of that book of books for the Hindus, the Bhagavadgita, the quintessence of the Upanishadic teaching. Here we find a statement of our doctrine, revealing to us the 'nature' of the ultimate Reality, if only we should try to intuit its spirit by transcending the intellectual tinge of the words of our common-day use. Our words having their function in a relational world are not the unambiguous media we require to 'describe' the Absolute. This is a primary precaution in all studies of the Absolute. Ill-use of words has been a cause of many of the misunderstandings in philosophical disputes and also of the odium with which philosophy is looked down on by many. Philosophers differ so much not because they *utterly* fail to catch at the nature of Reality as such, but because Reality *from our point of view* is so very variegated that on account of our predilections and the consequent nature of our questions, we get, as it were, different presentations of it according as we approach it. Each view is hence 'true' within its limits. For, with the attainment of Absolute Truth the problem itself disappears. Thus then, it is a fact that not only do we use words but many times words use us. Verbal quibbles are mistaken for philosophical disquisitions. *Fallacia secundum quid* and its converse seem to be commonplace in specially philosophical discussions. My object in laying so much stress here

on this apparently trivial matter is the simple but practically difficult one of attaining mutual understanding through words and sometimes even in spite of words. There has been a misunderstanding of the message of the Vedanta (lit. the ultimate knowledge) even in educated circles. We have in India 'professional' Vedantins whose life in many cases, strange to observe, is just anti-vedantic. True Vedanta does not make one sink to the level of the beast or the stone, but see one mighty unity in all nature and work more efficiently *in the world* for the very light it throws on the problems of life—a sort of spiral apex, to use a simile, where activity and inactivity, being and not-being, subject and object, in short all the dualities of this world of appearance culminate and 'lose' themselves in a higher unity. It is Vedanta alone that shows the possibility for a real concrete universal life. The appearance-life like two crossing lines ever diverging from the point of contact in opposite directions creating in us graded ideas of good and evil, truth and error, because of our occupying the position of that point, disappears in the light of the Vedantic doctrine into one point of unity where infinity and one are One. Verily the world *exists* by opposition or contradiction and when once we get 'behind' it by transcending it, we 'see' Reality 'as it is'; for, 'there' Knowledge, Knower and Known are One (to use 'intellectual' terms).

Generally stated, then, the doctrine of the Absolute is that though we see around us manifoldness of things, such manifoldness when considered seriously is one which cannot be but for some sort of relation based on opposition underlying it; and when we transcend it we have a unity which absorbs the relation into itself and thus the manifoldness along with it. Do we not in our ordinary thinking take, for example, Time, Space, Causation, etc., as so many reals? But can we seriously maintain that these are so many ultimates *in which* Nature is? Is it not rather true to say that *these are in Nature*, and hence hold good in the apparent multiplicity of Nature —from the standpoint of individual things? That is at least what we may mean by saying that these are appearances in things and that with reference to the Whole they have no existence. Thus it is, to take one case, that the past-present-and-future of our consciousness is Eternal Now in Reality (which phrase is nonsense if interpreted strictly by our ideas), and that the latter can no more be derived from the former than a cube from adding together any number of plane squares. The variety of the world, therefore, is due to 'oppositions' and 'contradictions' which are only 'appearances,' non-realities from the absolute point of view, but which appear as real for

the reason that we, as we generally consider ourselves to be, are involved in the opposition. The most fundamental of such oppositions is that between Self and not-self, each having existence on account of the other: and that is the cause of the existence of our human world and our human values which we are prone to regard as ultimates. A higher transcendent standpoint uniting all is possible and is, and it is not for us to deny it from the lower one which we almost universally occupy: for such a denial implies dragging the higher to our level, when, of course, it will be one *along* with the lower showing no reason for its existence. It is to be noted here that it is the same Absolute that we reach whether we proceed from the 'oppositions' of intellect, or of feeling, or of will, though when we come to a statement of it we cannot but use cognitive terms. The doctrine of the Absolute, therefore, says simply that our distinctions are not absolute, but only distinctions which exist because we are unaware of the Absolute, because we consider ourselves separate entities in the midst of separate entities. It is the 'false' opposition that we take to be real; and we thus seem to enjoy and suffer, act and be acted upon, know and be known. I am reminded here of a very suggestive Vedic statement which goes, "Whole is That, whole is this; from (That) Whole (this) whole is 'projected'; isolating (this) whole from (That) Whole, That Whole alone remains" (Intro. to Isa. Up.). 'That Whole' is the Absolute; 'this whole' is the world of appearance. 'This' is used in the Upanishads with reference to the world of separateness, of 'appearances,' and 'That' with reference to the Absolute. The spirit of the statement is that 'this' world when detached or isolated from That, and looked on as separate by itself is nothing, its true reality being in That Whole which is ever the same in Its absoluteness. The appearance-worlds are in That and not That in them: That as That can never 'appear'. How 'That' stands to 'this' is a question which cannot be admitted because it cannot be raised: for 'That' is not one *along* with 'this' to admit of a relation. Hence the Many are of 'this' and not of 'That'. "This" in its becoming explicit, appearing, is many and these many reflecting in themselves variously the potentialities or aspects of the whole look upon one another as so many 'others'—so far as we take conscious units like ourselves into consideration. We should remember, however, that neither 'this' nor the 'many in this' can be but for That. Thus the many are and yet are not. Evolution, becoming, time, space, individuality, etc., are of 'this' and are relatively 'real' to this: but to say that these are absolutely

real is suicidal. The 'this' as an apparent appearance-whole, has its ultimate root in That, and may for certain purposes be considered by itself as we shall see in due course when we take up the Vedantic thought on God and Nature. Such is the Vedantic solution of the problem of 'the One and the Many'. Unless we clearly note the 'nature' of the Absolute and of this appearance-world in That by the light of our own intuitive 'spirit,' we should be making an unconscious assertion to ourselves, due to force of habit, that That is somehow an 'other' to this, thus completely misunderstanding the whole doctrine and raising unanswerable because inadmissible questions. In this doctrine there is nothing to rob us of our individuality as some fancy; on the other hand our pseudo-individualities find their reality in the unitary Individuality of our world. If this should still dishearten some the fault is not of the doctrine, but of the element of 'Avidya' (Sanskrit for ignorance of Reality, for nescience) dominant in our incipient self-hood. The many in 'this whole' are in Reality the Absolute. But again, it is to be remarked that when we speak of 'whole,' 'all,' we should guard ourselves against another intellectual prejudice; we cannot help using these terms, for we have none else. The Whole *is not* a whole of parts, of all these merely added together.

It is the common aim of all philosophic thought that unity is to be somehow attained. Some rest satisfied with a relational unity; but nothing less than absolute unity satisfies the *Vedantic* demand. Should we care for less than that, philosophy seems uncalled for; we must be satisfied with mere "sciences". The relational unity is based on opposition and hence for philosophy or ultimate knowledge is untenable. This tendency towards the one unity is perhaps as old as reflecting man; for some kind of description or other of the Absolute is found in the philosophic and mystic (a victim to much injustice) literature of all peoples, ancient and modern. The descriptions vary no doubt, for *they* are appearances after all conditioned by our brain, and because, again, the Absolute *for us* is Infinite. As men we are to intuit the Absolute in all of them: for, as we shall see, ours is a peculiar position in Nature.

The Absolute, thus, is a term to signify the totality (for want of a better term) of the whole, known and unknown, existent and non-existent, and looked on as a unique secondless unity. It is a unity in the sense that every unity that we know of is only a 'reflexion' of Its transcendent and yet somehow (to us) immanent Unity. It is more than experience in the ordinary sense; for experience is a word

implying three indissolubly related elements—the experiencer, the experienced, and the experience; and It is all these in One. It is on account of That Whole 'this whole' is as a 'reflexion'; and becoming explicit 'this' appears as many though in Reality it is the Absolute. A crude simile may be used here to understand what is meant by becoming explicit and hence many. When we *ex*-press a complex thought of ours which in its implicitness cannot be said either to exist or not to exist (from the point of view of words when expressed) except as one undifferentiated whole, we have long sentences, explicit statements with words related to one another in multifarious ways—differentiations in short; each word by itself is unreal in the strict sense, its individuality being only that of the whole. The Absolute may be said rightly, then, to be the beginning, the middle and the end of beings, as embracing the appearing and disappearing of many 'this-es,' as 'Implicit-explicit-implicitness' in One. It is not any one of the 'many,' nor all combined merely in a sum, but all as One. There are very nicely expressed conceptions of 'That' scattered throughout the Vedantic literature. My aim here is to give some impressions of mine from my own studies in the light of Occidental metaphysics, especially of the Absolute of Prof. Bradley.

It is not possible to know the drift of the Vedantic teaching, which was particularly concerned with practical life, without some acquaintance with what it has to say regarding man, Nature and God (in Sanskrit Purusha, Prakriti and Uttama-Purusha or Isvara).

Regarding God Vedanta says that He is the 'first *ex*-istent' (in a relative sense as we shall see) 'from' the Absolute, coming 'out' from That, as it were, from a state of 'slumber' in that, coming into actuality from a state of potentiality. He is the 'this,' a system or cosmos, a whole of consciousness-matter-and-energy, which is the evolving, changing world of space, time, etc., of our consciousness. He is the God or Ruler of popular theology. In His true nature, however, He is the Absolute. His is the consciousness that we 'share'—the one consciousness of the universe that all beings reflect in diverse degrees. "Know Me further, O Bhârata, as the Field-Knower (one consciousness) in all fields (bodies or things); verily I say Knowledge of Field-Knower and Field is Knowledge real" (Bhagavadgita, XIII., 2). The sun with his system is the physical representative of our Isvara with His system. There are many such systems or universes, and hence many Isvaras in the Whole Universe, and these Isvaras are all so "many," as it were, in the bosom of the

Absolute. The Devi Bhagavata clearly speaks of many such Isvaras with their systems. "Grains of sand are perhaps numerable, but of universes (there is) not any (numbering)" (IX., iii., 7). For our purposes we may consider Isvara in the abstract. He separated, as it were, by the thinnest 'film' of individuality from the Absolute has His non-ego in this separation which thus forms the 'matter' of His universe—the primary 'opposition' necessary for the existence of a universe. The universe may thus be considered as His body or even as Himself provided we do not misunderstand the position. By His power of Maya (Daivi Prakriti), the one divine energy of His, He multiplies Himself, "sacrifices" Himself for a universe, becomes more and more explicit. This process must be a limited one; for becoming manifest means well defined and hence limited. This process of becoming manifest or externalised is called Pravritti or forth-going; and correspondingly we have Nivritti or in-drawing. This completes the cycle of His universe; for Vedanta believes in cyclic evolution—slumber and wakefulness, to use certain graphic symbolic metaphors. The Absolute is the *Eternal* Cause, so to say, of these periodic appearances and disappearances of Isvaras with their systems, the formal cause of each succeeding system being, however, the preceding system. All our multiplicities and differences, therefore, are to be traced to the primary duality involved in the 'first' appearance of the Isvara and His potentialities.

But there is a difference here between Eastern and Western thought. Whereas in Western thought matter begins or ends with ether, the Eastern says that there are different varieties of 'matter' beginning with the first body of Isvara and ending with what we call physical matter (of which the Western ether is a species) which is but the limit to which the first primary limitation evolved (or involved); for matter, in the Vedantic conception, is nothing but limitation on consciousness for the very being of consciousness, imposed by the will of Isvara in His system. Corresponding therefore to these gradations of matter consciousness also manifests itself in different ranges. His more subtle form of matter is what is called spiritual, a word indifferently used both with reference to matter and the consciousness conditioned thereto. Thus evolution comes to be a gigantic scheme in a universe conducted by the power of Maya of an Isvara; and this triad —Isvara, Maya and Prakriti—appear as distinct so long as manifestation is, but disappear or are absorbed at the 'end' into That non-describable Unity. Maya as forth-going, creating illusory separatenesses, is called Avidya, or Asuri Maya,

and as in-drawing, destroying pseudo-individualities, is called Vidya, or Daivi Maya. It is thus the cause both of bondage and liberation for the Vedantin. Isvara conceived as the Absolute alone in reality is thus the radiator, sustainer and destroyer of His system. The Absolute is the one ever non-manifest basic existence or 'be-ness' (Sat in Sanskrit). The explicitness or manifestation of Isvara with all the variety and differentiations consequent thereon is what we may call nature, the "this" referred to. He is the nature and without him there can be nought in the world. For us therefore, He is the representative of the Absolute; and we should be doing injustice to Vedanta if we identify Him as Absolute with Him as appearance. Hence is the relevancy of the oft-quoted simile which though not quite accurate (for accurate similes there can be none, the Absolute alone being similar to Itself), is very graphic in describing the Absolute with the countless Isvaras in It: The Absolute is like the mighty ocean whose fringes form the waves ever going out and coming in, of Isvaras with their systems appearing from and disappearing into It.

So far no case has been made out for the Absolute, no proof has been attempted. My primary aim has been to describe the doctrine as I understand it. Regarding proof I am convinced there can be none. The Absolute just because it is the absolute cannot properly be said to be proved. We find that we have to postulate it by an *infelt* necessity if we want to 'understand' the universe as a 'whole,' as a unity. Attempts to prove it will be like (to take examples on a smaller scale) Mill's attempt to prove the law of causation or Hume's attempt to find out the Self.

Regarding man what has Vedanta to say? Vedanta believes that every successful philosophical inquiry must be based on a thorough understanding of man's position in Nature, and hence no school of philosophy can be more experiential than Vedanta. Man is conceived as a "reflexion" in miniature of Isvara with His Cosmos who again is only a reflexion or the 'highest' appearance, *as it were*, of the Absolute. Appearance *is* (appearance) only in the apparent manifoldness; in the Absolute it *is not*. Any particular thing of our experience is what it is because of the infinite relations in which it stands or opposed to 'others'; its true nature is where it takes into itself the 'others' when it ceases to be itself and becomes the Absolute. The becoming explicit, then, of Isvara culminates in man, the pravritti-process just begins its inverse course in him. Hence the ethical importance of man as one in the many. "Nivritti" begins with

him and hence the conflict between higher and lower, reason and sense, good and bad, and so on. Herein also we find the significance of religion in its true sense as an attempt to link him back to his Mother-source. It is in this sense that we have to understand every truly religious reformer. The various religions in their true spirit are so many attempts conditioned by the nature of the people to whom they were given, to bring all men into one divine solidarity. Their Teachers are men (shall we say divine men?) who have seen the 'other End' of Life, who have been fully surcharged with the 'essence' of Isvara. We are inevitably driven to seek for That by the inherent impulse in ourselves—by That. Perhaps the ultimate reason of all our petty endeavours too for 'this' or for 'that' is, unconsciously to ourselves, That alone which through 'avidya' we vainly seek 'here' and 'there'. Hence the equality of all religions for the Vedantin. We may state our position regarding man in a different way again. The Pravritti-path may be looked on as the period of sowing and the Nivritti-process as of reaping; that is, in man alone we find the reproduced aspects of the Cosmos as emerging to functional capacity. In the case of the sub-human kingdoms the 'sowing' is not complete. Nature is doing for them what man can do for himself; man is self-conscious and they are not. Hence the responsibility on man to lighten the work of Nature. Such is the theory of Evolution, evolution of life and consciousness and *hence* of form, implied in the Vedantic thought. Thus it is that we have the statements, 'Man know thyself,' 'Man is the micro-cosm,' 'Thou art That,' 'Ye are the temples of God,' 'Man is the measure of the universe' (with many apologies to Pro-tagoreans), etc. Studying man is to study God and Nature; and hence the importance of a *real* psychology for philo-sophical purposes. As we evolve from mere 'manhood' our 'link' with Isvara or God gets more and more strengthened, until there ceases the petty distinction between 'me' and 'thee,' a distinction which seems so very ultimate to our half-opened eyes. This does not mean annihilation, but the gaining of the one real individuality in the universe, solving the *to us* perpetual problem of Freedom and Destiny. A rough simile again may be taken from our personal life in this context. Do we not see, because we are able to tran-scend it as men, how any particular psychosis or psychical process which is complete in itself, especially in animals, is integrated with and merged in what we call our self. It is not there merely as a part in a whole. The psychosis by itself is the 'Self' for the time being; but its reality is in its

absorption in the whole larger self or personality. Man is called in Sanskrit Purusha; but Isvara is Uttama or supreme Purusha. To make the position clearer we may express the place of man in Nature according to Vedanta in *quasi* mathematical terms thus :—

The momentary psychosis	: our personality
: : our personality	: our true ego
: : our true ego	: (our) Isvara
: : Isvara	: . . .
. . .	: the Absolute

This statement is of course from a purely human point of view.

There is another peculiarity in the Vedantic doctrine regarding man. He is not the mere person of a threescore and ten years of terrestrial life. The true man, the real man called Karana-atma puts forth periodic appearances on earth, incarnates cyclically—a reflexion 'lower' down again of what is true of Isvara 'above'—for reaping what was sown before, for ultimately gaining true Self-hood in the Cosmos. The Karana-atma stands *relatively*, thus, as the 'absolute' to the terrestrial man, integrating into itself the fruitage of his various experiences, this incarnation being effected by a sort of limitation on the true nature of the Self. The law guiding these occurrences is the law of Karma, of Causation, holding true of little things in a Cosmos as well as of Cosmic cyclic evolution. This law holds the person in bondage so long as he wants or desires this or that showing a lack of 'Viveka' or discrimination between Reality and appearance; for such desires imply his identifications with separatenesses in the manifoldness, and thus bring the man within the fold of the law which holds good of parts within the whole. If by the knowledge of Reality he sees himself as the Absolute in reality, then 'he' gets 'above' the law. Such a 'being' is what we know here as a Mukta (liberated self) or Nirvani (one whose consciousness has transcended the human). I have to dilate on this matter to this extent, because I wish that Vedanta should be understood not as a play of uncurbed imagination with results that are mischievous to human life, but one having a sublime practical object in view. Only he who lives a truly Vedantic life will be able to appreciate the 'mental' attitude which Vedanta teaches. There is no greater hell for the Vedantin than isolation; and what is isolation but a temporary identification with a 'this' or a 'that'? It is the knowledge of the oneness of the whole, working in one's life that enables one to save oneself from these compulsory isola-

tions of life, and 'links' one with the one divine life. Such is the general outline of the Vedantic teaching regarding man, Nature and God. It must however be noted again that the old books of the ancient Hindus are books written as practical instructions for purposes of meditation and of practical life. Thus we have bare statements of fact which it is the business of everybody to verify for himself by actual experience. It was not their object to discuss and force learned metaphysical disquisitions on unwilling ears. It is this reserve that still remains as a fossilised superstition in the reticence of 'learned' Brahmins to discuss with 'aliens' on these matters. Their statements are neither 'scientific' nor 'unscientific,' but remain non-scientific serving as hypotheses worthy of our investigation. But the one important feature conspicuous in their descriptions is the fact that 'experience' as they understood the term is of hundred-fold complexity to what *we now* regard it to be. The very fact of their constant mentioning of different 'planes' of matter and of consciousness is quite sufficient to convince us of their standpoint. They speak as if they had them as 'facts' and do not reason about them. The universe-process of an Isvara thus 'appears' from the Vedantic standpoint as a mighty process of attaining self-consciousness at once thorough and universal. That seems to be the spirit of the constant Upanishadic injunction "Know Thyself"; for Vedanta is the statement of the philosophic doctrine from the cognitive standpoint; Vedanta is a Darsana, an aspect of study.

A few quotations may be given here on some of the points referred to.

"One only, without a second" (Chh. Up., VI., ii., 1).

It is the unity, which never 'appears' (for, by appearance it is many), but which *ever is in its absoluteness.*

"That willed; may I be many, may I be born." That is Isvara willing to radiate a universe at the beginning of a world-cycle (Chh. Up., VI., ii., 3).

"This Self is Brahman" (Mandukya Up., I., 2).

"All this is verily Brahman" (Chh. Up., III., xiv., 1).

"To know oneself is to know the Self and knowing It all is known" (Chh. Up., VI., i., 6).

"Two 'forms' of Brahma, of form and of no form, perishing and imperishing, finite and infinite, existent and transcending existence" (Bṛh. Up., II., iii., 1).

"Earth, water, fire, air, ether, mind, buddhi (pure intuition) and ahankara (egoity), these eight are the differentiations of Prakriti. That which holds together the multi-world, other than the manifold Prakriti, the higher, of life-essence,

the Parâ-prakriti, know thou that, O Arjuna. Know that this is the source of all beings; I am the origin as well as the end of all this world. Beyond Myself there is nought else that exists; 'this whole' is strung on Me like gems on a thread" (Bhagavadgita, VII., 4 to 7).

The Devi Bhagavata contains many statements regarding the two kinds of Prakriti, which will be of great interest to the scientist and philosopher of the modern type. But they are concealed in significant symbology, a kind of picture language which the ancients used for purposes of secrecy.

The thirteenth chapter of the Bhagavadgita is full of descriptions of the Conditioned (Isvara) and the Unconditioned (Absolute) Brahman, true knowledge, etc. Below are given a few verses regarding the former.

"I will tell you of That which ought to be 'known,' the beginningless, transcendent Brahma which cannot be declared to be either existent or non-existent and knowing which one attains to Its Eternality. Everywhere It stands enveloping all in the world, with hands and feet everywhere, everywhere with eyes, heads and mouths, and what is heard everywhere. Shining with all the virtues of the senses, (but) without any of the senses, supporting all, (but) independent of any, enjoying all attributes, (but) without any attributes (It is). (The Absolute percipient, perceived and perception in One.) Within and without all creatures, motion and non-motion, unknown in Its entirety because of Its subtleness. It (is) far away and (yet) near us. (The Absolute as both transcendent and immanent.) Unbroken in all creatures, yet enshrined in each as if broken, It is to be known as the all-sustainer, all-producer and all-consumer too. Light of lights and the 'beyond' of darkness, knowledge, object of knowledge and the fruit thereof, seated in the heart of all (It is)."

These are indeed very significant verses when properly understood; and the results of some of our modern metaphysicians are to the same effect. These verses need no further comment; touching them would perhaps taint their purity if it is not already done in translation. Sri Sankara,[1] the founder (not the originator) of Advaita (monistic) school of thought, may be taken as a type of the absolutist philosophers of India. Leaving out of account at present what he has to

[1] There is no historic evidence as to when he lived and whether his alleged works were his own or by some one of his order assuming the same name by custom. The works do not exhibit spotless scrupulosity in interpreting the Sutras. Still generally they may be considered as representing that particular school of thought to which he belonged.

say by way of commentaries on the Brahma-sutras and the Upanishads, I shall briefly refer to three or four verses of his "Dakshinamurti Stotra," a poem paying reverence to the ideal teacher who teaches his pupils this nectar of absolute wisdom. In the opening verse the keynote of the doctrine is struck by showing that this world is an appearance whose reality lies in something transcending it. In a sense this appearance-world is like unto a dream whose reality must be sought in a trans-dream condition—not in its explicit manifest condition but in its implicit non-manifestness. During the time of real awakening—awakening into the realm of Reality—the absolute oneness is known, but known as one with the knower. That is the reason of speaking of Reality in Vedantic literature as Atman, the Self, the Knower. For 'there,' one as the Knower is at-one with the known. The Brahma Upanishad says, "How can one who 'sees' the Self alone everywhere, see any 'other'?" (VI., v., 15). In the second verse he says, that in its 'beginning' this world is One Undifferentiatedness. But by the power of Maya it is seen as *ex*-isting in space and time. Next he says that the becoming explicit originates the non-real appearance-world which thus seems to 'oppose' That, claiming reality. That is how we have in Sanskrit the word "Sat" (to be translated as absolute be-ness) with reference to 'That' and 'a-sat' (*absolute* non-existence or non-ness) to 'this'. The claim of 'this' to Reality as such is thus an illusion—the much-talked-of Maya. The Taittereya Upanishad says, "At its root ("in the beginning") 'this' is not (a-sat) only" (II., 7). Such in general is the trend of his poem. There is a fine verse in the Gita which I am tempted to quote here: "What is night for all creatures (the manifold) is 'waking' (absolute Reality) for the self-controlled (seer); and what is 'waking' (the appearance-world) for the creatures that is night (unreality) for the 'seeing' sage" (II., 69). Such is the absolute Monism, to use a modern word for an old thought, of the Vedantic doctrine.

We must in passing note the doctrine of Maya, the much-abused and well-nigh misunderstood cardinal teaching of Vedanta. Stated plainly it means that the appearances of Isvara are only delusion if we take them seriously, *as* they merely appear—as distinct sharply defined realities. We, living in this world of realities—oppositions and contradictions—cannot properly state in *our* terms the nature of the ultimate reality. Says Taittereya Upanishad: "From which speech along with mind return without approaching, knowing That as the Bliss of Brahman, one need entertain no fear from anything" (II., 9). If we should forcibly try to shut

reality in our terms, it will be only a fancy of ours. But through words we can use our 'intuition' to apprehend to some extent what it might be. Thus we cannot raise a question Why Reality manifests itself; for this implies an 'opposition' which Reality does not allow. There is the assumption in the question and hence in the answer that manifestation must be explained in terms of our motivation which is possible on account of an 'other'. This cannot be in the case of the 'self-contained' Absolute. Hence it is an unanswerable question. Stated otherwise—how manifestations come to be—the question can be admitted, the answer is forthcoming; for, as already stated, Karma, causation, is the principle governing the occurrences of cyclic manifestations. Maya thus becomes the *power* (of Isvara) behind the universe, and not as popularly understood a synonym of pure unconditional illusion. The apparent separations in 'this' and yet their Absolute dependence on 'That' both "in" and 'above' them, where they cease to be themselves as they are to us, are all effected by Maya. It is not therefore as appearances that they are 'there'—a contradiction there too if so,—but as the non-separative Absolute Itself. The Maya is in the claim of 'things' as ultimate reals by themselves; and hence the identification of Maya in this sense with Prakriti or matter, the basis of division and multiplicity. This Maya (in the general sense) as the power of Isvara in bringing a system into *existence*, appears to us both as the centrifugal force in the becoming of the one into many, and as the centripetal force in the 're-becoming' of the many into one. Maya thus conquering itself is symbolically represented as the serpent swallowing its own tail. For ethical purposes however, unqualified Maya stands for the separative element —advidya or ignorance; but as Vidya it is the same as *Daivi* Maya, leading one to fuller realisation of the unity of the world. The greater the idea of separateness, the greater is the delusion (Maya); the greater the idea of unity, the less it is. An upanishadic teaching goes, "Having 'crossed' death by Avidya, one attains immortality by Vidya". Thus avidya or intellectual relational knowledge, when perfected, transcends itself, and leads to Vidya or ultra-relational intuition into Absolute unity. Thus though Maya is unitary and continuous, still on account of our position, it appears as running in two opposite directions—another 'Maya' again. It is in this light that Vedanta understands the doctrine of 'degrees of reality'. This doctrine of Maya is misunderstood and misapplied, because people through confusion and unreflectiveness think that appearances as appearances—from the standpoint

of appearances—are not. It is on account of such ignorance that many so-called Vedantins commit themselves to a most paradoxical and irresponsible life. It is impossible for a true Vedantin to do anything immoral, because it is a psychological impossibility. An evil act betrays the existence of an unuprooted idea of separateness—conscious or subconscious —which is delusion. A true Vedantin is one who has conquered 'Maya'. Thus it is that 'virtue is knowledge'. Without a knowledge of the Absolute we cannot say logically that we live in an unreal world. The doctrine of Maya in saying that the 'world' is unreal is therefore quite consistent; for the world is only by difference and manifoldness, and these latter are not so in reality. That is the reason why Sankara says in One of the references, that the Absolute is the pure Sat, and this world of appearance is A-sat. This A-sat is thus due to Maya.

We cannot enter here, nor do I feel competent to do so, into the details of this doctrine of Maya with all the account of the 'mechanism' of the universe. They can be found, of course, in veiled symbolic language in the Purânâs, especially in the Devi Bhagavata and in the Lalita Sahasranamani. There is a purpose in the veil, for a true knowledge of Maya is a knowledge of the power of powers, and by ignorance one can bring destruction on oneself and danger to humanity.

It may be noted here that two terms—Mûla-Prakriti and Avyakta—are of frequent occurrence in Vedantic literature and require a word of explanation. Mula-prakriti or root-matter stands for the first-veil of matter undifferentiated yet into the various grades of existence, by which the Isvara of a system becomes self-conscious on his first emergence 'from' the Absolute. By the further energisations of Isvara, this root-matter 'evolves,' differentiates itself into the various beings of a system. Mula-prakriti is sometimes also called Avyakta (undefined). Avyakta is a term indifferently used both with reference to the non-manifest Brahman or Absolute, as well as the undefined matter. And since there is a partial similarity in these two cases there is a justification in the use of the same term for both, though the distinction between avyakta as undefined matter and Avyakta as the Absolute non-manifest 'Sat' should not be forgotten. "At dawn (of cosmic day) the definite all arise from the indefinite (matter); but at Eve they disappear again into the same undefined. This same swarm of creatures evolving from shape to shape dissolves again by law at nightfall and appears at dawn of day. A yet higher 'nature' than (this) avyakta there abides, absolute and eternal (transcending

existence and non-existence) which when all creatures disappear, alone is never not. That is called the non-manifest (Avyakta), the Imperishable; That is said to be the supreme Goal; reaching Which none returns. That is My highest Abode" (Bhagavadgita, VIII., 18 to 21). Again matter as differentiated (Prakriti) is described as possessing three attributes, Sattwa, Rajas and Tamas (translated as rhythm, activity and inertia). To understand what this means, we may remember what we have already described matter to be. These three attributes then express in their different and various combinations the different and various kinds of limitations which consciousness and life must have in order that they may be. Hence these attributes make up what we call matter. "This whole world is deluded because of this triuneness of qualities in things, and hence knows not Me, the unchanging trancendent." "There is not either on earth or in heaven amidst gods, a creature free from these three qualities, from nature born" (Gita, VII., 13; XVIII., 40). It is curious to observe that these qualities answer to some extent to the three laws of motion according to Newton, and that matter is being explained by Modern Science in terms of motion.

It remains to be seen, in conclusion, what the bearing of the Vedantic doctrine is on some of our practical problems.

Taking sciences first: Sciences from the Vedantic point of view, are the various kinds of endeavours to go from the explicit manifoldness to the implicit unitariness of our world. In the case of physical sciences studied purely as sciences—though we are now having more and more philosophical sciences—our conclusions are pointing out to an undifferentiated 'basis' of matter: beyond that physical sciences have not yet gone. Thus we are left with a lifeless carcase of ether (or whatever it may be) which does not further respond to our questions. The reason seems to be that we have started with only one-sided questions, and hence 'nature' as presented by sciences is partial. Further 'matter' is to be understood not by itself, but in the light of consciousness and life for which it is. This aspect is what is ignored by physical sciences. And even what we call biological sciences commit themselves to explanations from the physical point of view. Unless this prejudice be remedied, it would not be possible for modern physical sciences to make further advances into the nature of reality. For matter, from the Vedantic point of view, is called Tan-mâtra (lit. measure of That) and is self-explaining. A true science is one which studies matter and consciousness, form and life,

from the point of view of the latter: then shall we have philosophies of the different aspects of this variegated world, and not merely (and sometimes self-contradicting) sciences. Vedanta then has no quarrel with sciences if they perceive their own self-limitations. Regarding psychological sciences, the same defect seems to infect them; it is so because they are modelled consciously or unconsciously after physical sciences. These also require thorough overhauling to satisfy the Vedantic demand: for, at least for the Vedantin, there is a confusion in modern psychology between mind and consciousness.

The Vedantin is perfectly tolerant with all our various endeavours; he has no quarrel with anybody. He believes in the verse of the Gita: "As is the way by which people try to reach Me, even so do I receive them; men in all their endeavours are following My path alone, O Partha" (IV., 11). It is only by failures, by evil, that we become wise and there can be nothing wrong of a universe which is the wisdom of Isvara Himself; and a man is considered wise in proportion to his conscious co-operation with Isvara for the very privilege which he has in sharing His nature. The scientific aspect of Vedanta is what is called Raja-Yoga—kingly science; and it is a peculiar training which one undergoes to study things not from their mere external appearances but from the point of view of one's consciousness which one tries to develop and enlarge from within. A true Raja-Yogi is one who knows both form and life from a study of one's life-side 'within'. The Western scientist may laugh at this; but the Raja-Yogi is not disturbed, for he is centred in the bed-rock of knowledge itself and he *knows* that. For further remarks on Ethics and life, from the Vedantic point of view, I have no space here; we may take another occasion to study them.

We may close our study with the consideration whether Vedanta is pessimistic, atheistic, sceptic or fatalistic. To answer these charges, I must first confess that I do not understand clearly what these terms mean; I am of opinion that herein we enter a field of individual predilections and hence there can be no argumentation. If we get answers either affirmative or negative to these questions such answers are not entirely due to the nature of Vedanta as such, but take in a good deal of the questioner's mental constitution. For how can the same subject take at the same time two contradictory predicates? If Vedanta be an utopian scheme, then perhaps we may put these questions to it as if it were a piece of art. But I believe Vedanta is serious and hence cannot entertain these questions. If Vedanta is truly descrip-

tive of the nature of Reality as the "originators" believed because of the first-hand knowledge of their own into infinitely wider ranges of the Cosmos, then it is we that are to modify our psychological attitudes towards it. Nor can we put the question whether Vedanta is 'useful' to us for the very same reason. We should not involve ourselves in paradoxes, for a paradox is a consequence of impossible or inadmissible questions.

Thus far I have described the general nature of the Vedantic doctrine as I have understood it. I have no claim to originality; for there can be 'nothing new under the sun'. Since I feel that its teachings are elevating and make possible the only life that is worth living at once human and divine, concrete and universal, I believe it might be so to many more that may know it; for Vedanta is a message of universal peace as the final words of every upanishad stand,

"Peace to all".

V.—THE LIMITS OF DEDUCTIVE REASONING.

By H. S. Shelton.

The present short paper contains the germs of ideas which it is hoped to develop more fully at a later date. It is set forth briefly in order to elicit from logicians criticisms which may modify the form and substance of the fuller presentation.

Those who have read my paper on the "Methods of Applied Mathematics,"[1] which, if valid, has important scientific consequences,[2] will note that much of the exposition would be applicable, not only to mathematics, but to other forms of deductive reasoning. It is here proposed to indicate in outline within what limits such an application is possible and to call attention to a few collateral consequences. An exposition of the principles of mathematical reasoning is only capable of fuller application in so far as it is based on premisses which deal with mathematics as reasoning. That portion which deals with the specific characteristics of mathematics is irrelevant. It will, therefore, be convenient briefly to mention the affiliation of ideas and then to treat the subject *de novo* in its relation to logic.

The central idea of the treatment of mathematical reasoning was found in the assertion of an essential distinction between the sphere of concept and that of percept.[3] Mathematical reasoning, especially in its aspect of absolute intuitive certainty, was classified as belonging to the sphere of concept. The relation between the iron rigidity of the conceptual process, and objective reality, or any aspect of it, is a metaphysical problem left obscure. It was, however, explained

[1] *Journal of Philosophy*, 30th September, 1909.

[2] *Journal of Philosophy*, 1st September, 1910.

[3] *Mind*, January, 1910. The distinction, as here shortly expressed, is liable to be misunderstood. It hardly needs to be stated, that, in ordinary percepts, there is a considerable conceptual element; but the distinction between these and the concepts detached from the corresponding percepts and used in thought and reasoning, though not easy to define, is easy to recognise. Every distinction of this kind, needless to say, must be judged in relation to its context.

in considerable detail that this form of certainty could not be transferred to the world of percept. The applicability of the conclusions of mathematical reasoning to physical problems, or to concrete perceptual existence in any shape or form, was shown to vary with a number of conditions. At its best (*e.g.* Geometry) the validity was nearly absolute. In other cases, the conclusions were shown to bear no recognisable relation to concrete reality.[1]

It has seemed to me probable that a number of doubtful points concerning the nature of deductive reasoning might be cleared up by a recognition of the validity of similar principles in so far as they are applicable. I shall, therefore, categorically, state the following two principles, which, when properly understood, will, I think, be accepted as obvious and then proceed briefly to elucidate a few simple deductions.

(1) Every proposition, in so far as it is made the premiss of any process of reasoning whatever, thereby becomes a concept or abstraction from reality, and the terms do not refer directly to concrete reality but to the particular system of concepts implied by the form of the statement.

(2) The deductions, in so far as they result from a correct process of reasoning, possess absolute validity only in reference to the same system of concepts to which the premisses apply.

The exact meaning of the term " concept " requires explanation. It will best be illustrated by a simple mathematical analogy. Every one, in practice, has a clear understanding of the meaning of the term 4. But any one who attempted to explain its exact meaning in the world of concrete reality would find himself involved in metaphysical difficulties. There is, of course, no *thing* in the concrete universe which can be described as 4. The term is an *abstraction from reality*, or, as I should prefer to name it, a concept. On a very few concepts of this kind all modern mathematics is built up. Now further thought will show us that a similar difficulty arises with all class names. That they *do* refer to *something* in concrete reality, we can accept as an axiom of metaphysics, but it is not easy to say exactly to *what* they refer.[2] And, I am maintaining here, the same applies to *all* terms *in so far as they become steps in a process of formal reasoning*. The italicised qualification is important. It must be clearly recognised that ordinary conversation and literature contain many methods, of varying validity, of arriving at truth.

[1] See article, *Jour. of Phil.*, 1909.

[2] On this point, again, see my article on " Evolutionary Empiricism ".

Purely logical reasoning is but one of them. Nevertheless, the statement applies to logical reasoning as such.

The position will be rendered clearer if we note the form in which a process of reasoning is commonly expressed. Take, for example, the ordinary syllogism Barbara.

"All M is P.
All S is M.
All S is P."

This, it is contended, is the truly valid logic. The "terms" S, M, P have neither connotation nor denotation. They represent, merely, the blank form of reasoning. And here, it is clear that logical reasoning possesses precisely the same validity as mathematics. So far as the form is correctly observed, the results are absolutely valid and purely conceptual. Immediately, however, connotative terms are substituted for the blank forms the relation of the conclusions to, and their validity with regard to concrete reality, becomes a complicated problem which requires further investigation.

It will, of course, be recognised that *if* the premisses are absolutely correct (perfect abstraction from reality) and *if* the terms are absolutely rigid (*i.e.* used in precisely the same sense throughout the argument) and *if* the argument proceeds according to correct logical form no error can creep in. But it will equally clearly be recognised that, in practice, this absolute accuracy and rigidity is not and cannot be observed. In most simple arguments the conditions are fulfilled asymptotically. But even these contain the germ of fallacy.

The fundamental problem of logic thus becomes reduced to precisely the same form as the fundamental problem of mathematics. The ultimate sources of error can be described in precisely the same terms:—

"(1) That the abstractions on which the reasoning is based have, in a very small percentage of cases, absolute intuitive certainty or intrinsic accuracy. (2) That the concepts are never complete abstractions from reality, and the degree of the completeness can only be determined empirically by observation and experiment (p. 537)."

The working out of these conditions, with illustrative examples, it is proposed to defer to a future occasion. It will be noted that mathematics differs from other forms of logical reasoning principally in the rigidity of the terms and in the length of the chain. It will, therefore, follow that, amongst other ways, the necessary treatment of logic will require more careful analysis of the results of variation and

the meaning of terms, *i.e.* the non-rigidity of concepts. The consequences following from the length of the chain of reasoning, will, on the other hand, be less important. But these, and other problems, cannot be treated in a brief outline. It will suffice for our present purpose to note the fundamental position that all strictly logical reasoning is conceptual, that, in so far as it follows a valid process, the intuitive certainty is strictly limited to the conceptual sphere and the applicability of the conclusions to the object world is a problem which requires specific consideration.

Having stated this position, it will be interesting to note two consequences. The first relates to fallacies, the treatment of which, in modern logic, is generally regarded as unsatisfactory.[1] It will immediately be apparent that the old division into formal and material fallacies at once becomes fundamental. Formal fallacies correspond to errors in the mathematical process. But a new light is thrown on what have been termed "material" fallacies. These admit of no hard and fast classification. They become a factor more or less implicit in *all* reasoning whether that commonly regarded as valid or the contrary. A material fallacy is an inexactitude in the fitting of the conceptual series of logical reasoning to the perceptual series of concrete existence. It is always present, if only in infinitesimal degree. Only when this degree becomes great enough to be of importance does a "fallacy" arise. The treatment of "material" fallacies, thus resolves itself into another aspect of the conditions under which the results of logical reasoning are applicable to concrete existence, which, as we have already stated, it is not possible to treat in a brief outline. As and when the "fitting" is exact, fallacies vanish, at other times, fallacies abound.

The second consequence relates to existential import. According to the view here briefly outlined, this controversy becomes meaningless, and the problem of the existential import of propositions vanishes.[2]

Every term and every proposition is "existential" in the sense that it implies a concept and is not necessarily so in any other sense. The exact "meaning," or reference of the terms or propositions to the various "universes of discourse"

[1] *Keynes*, the standard book of the present time, gives no formal treatment whatever, merely regarding them as breaches of the rules of the syllogism, a treatment only applicable to *formal* fallacies.

[2] For the current discussion of this point see *Keynes*—"Formal Logic," chap. viii.

thus, according to the treatment here outlined, becomes entirely irrelevant to the validity of any and all possible logical inferences.[1] Moreover, there would be, in the light of this theory no meaning in ascribing "existential import" to subject rather than to predicate or *vice-versa*.

I am aware of the defects of this paper, of the inadequacy of the treatment to the magnitude of the problems involved, of the absence of the statement of the relation between the views here expressed and those of other thinkers. I must ask the indulgence of the logician for the defects inherent in a brief outline and for those peculiar to myself. It is my hope, however, to receive criticism and help from those competent to give it, before working out a fuller treatment of the essential ideas. These, however, seem to me to be of sufficient interest for publication in the present form.

[1] *Keynes*—"Formal Logic," chap. viii., § 159 *seq.*

VI.—DISCUSSIONS.

THE KERNEL OF PRAGMATISM.

In its conception of the nature of truth lies the central position of Pragmatism. It is about this point that the contest between pragmatist and anti-pragmatist has been the most stubborn, and still endures apparently without prospect of either side definitely prevailing over the other. I do not propose to join the *mêlée*. The object of this paper is neither to support the pragmatic doctrine of truth nor to oppose it. Before doing either of these things it would be well to seek to understand it. That anti-pragmatists have not tried to understand their opponents on this point would be an injurious and, in general, an unjust thing to say of them, but they do not appear to have succeeded in their endeavour. Had they been successful they could I think hardly fail to have perceived that mere ratiocination, be it never so logical, is, as against this pragmatist conception, a perfectly futile weapon; they would see that to convict the pragmatist of error by mere argument is impossible. Who, knowing the reality of colour blindness, would endeavour to persuade the colour-blind that they persistently confuse colour-names? I beg the pragmatist's pardon for the suggestion of deficiency carried by the analogy. I assure him I am not prejudging the case: I suggest that if the anti-pragmatist understood the pragmatist's view, and found his own nevertheless unmodified, he would see that his proper attitude towards pragmatism is as simple and obvious as is his attitude towards colour blindness.

Pragmatists will correct me if I interpret them wrongly. The plain fact, if I mistake not, is that the pragmatist cannot discover in his own mind something—an idea, a conception, apparently of radical importance—which the anti-pragmatist discerns, or supposes that he discerns, in *his* mind. Now if this *is* the fact, it is useless for the anti-pragmatist to try to convict the pragmatist of a fallacy alleged to result from a confusion between this idea, which does not form part of the pragmatist's mental furniture, and another idea which is common to them both; for the conditions are in that case obviously such as to exclude the possibility of this confusion. This is what the anti-pragmatist must be brought to see if further fruitless discussion is to be avoided.

At first sight, certainly, what the pragmatist asserts as to the nature of truth seems simply and obviously an error. This

obviousness, it may be remarked in passing, should make the cautious doubly cautious. We have a statement, in fairly definite terms, of what, according to the pragmatist, really is in our minds when we say of this or that belief or judgment that it is true. As readers of MIND well know, the assertion is thrown into various forms, but these different forms are all practically equivalent in meaning and intention. The most simple is perhaps this: that to look upon a belief as true is, *in other words*, to look upon it as a belief that 'works'; this defines the meaning of the word 'true,' as used in such a context; this describes what we have in mind when we thus use the word 'true'. Now what is commonly held, I believe, is that we look upon the fact of a belief's 'working' as evidence that the belief is true, that we infer the truth of it from the (effective) working of it, that the truth of a belief is something quite different from what causes us to infer that it is true. This distinction seems so plain and so well established that one is at a loss to understand how the pragmatist can have overlooked it. But Mr. Bertrand Russell has given a very ingenious explanation of how this might easily happen, of how, as he thinks, it actually has happened.

'There is, in the first place,' says Mr. Russell, 'an ambiguity in the word "meaning". We may say "that cloud means rain" or we may say "*pluie* means rain". It is obvious that these two senses of "meaning" are wholly different. What they have in common is that in each case we have one thing which points to the other . . . if we are not mistaken, pragmatism has confused' the two senses of meaning 'in its inquiry as to the "meaning" of truth. It has discovered something which has a causal connexion with our beliefs that things are true, and which, therefore, in the first sense of "meaning" may be taken to be what these beliefs "mean". It has then supposed that this is what is "meant," in the second sense, by "truth," *i.e.* what we have in mind (or should have in mind?) when we use the word "truth".' In other words, what we have in mind when we say of a belief that it is true (*i.e.* the meaning of the word true) is a wholly different thing from the causes which prompt us to call it true; these causes of the belief are not what we mean by the truth of the belief, they are criteria or tests of the belief's truth. 'Thus,' Mr. Russell concludes, 'pragmatism does not answer the question: What is in our minds when we judge that a certain belief is true?'[1]

The supposition is plausible, but it is almost certainly false; pragmatism really does answer this question, because it does not fall into the supposed confusion; but the answer is satisfactory only to pragmatists.

Mr. Russell's *Edinburgh Review* article is an elaboration of an earlier one in the *Albany Review* entitled "Transatlantic Truth".

[1] *Philosophical Essays*, p. 109. The essay from which this passage is taken originally appeared in the *Edinburgh Review*, April, 1909.

To the latter article William James replied in one of that collection of articles in book form which he published under the title *The Meaning of Truth*. But although several of the criticisms contained in "Transatlantic Truth" appear to be prompted by the belief in the existence of this confusion, the charge is not, as in the later article, explicit. We have to guess from James's reply how he would have met it. What he actually says is this:—

'Good consequences are not proposed by us merely as a sure mark, sign, or criterion, by which truth's presence is habitually ascertained, though they may indeed serve on occasion as such a sign; they are proposed rather as the lurking motive inside of every truth-claim, whether the "trower" be conscious of such motive, or whether he obey it blindly. They are proposed as the *causa existendi* of our beliefs, not as their logical cue or premise, and still less as their objective deliverance or content. They assign the only intelligible practical *meaning* to that difference in our beliefs which our habit of calling them true or false comports.'

To believe that Christopher Columbus discovered the new world, and to believe it to be true that Christopher Columbus discovered the new world are one and the same thing. It is easy enough to accept the view that good consequences of beliefs are *causa existendi* of these beliefs, notwithstanding its air of paradox; but the further proposition that they assign the only intelligible meaning of the difference between truth and falsehood is embarrassing. The position seems to be: Given a certain belief; let the consequences of the belief be good, we call the belief true; let the consequences be bad, we call it false. Thus the meaning of the word true (or false), as applied to a belief, is "comporting good (or bad) consequences". The anti-pragmatist must, however, object that although he may call the belief true if it works, he does so not because he regards the working of the belief as the truth of the belief but as an indication that it is true: the truth of a belief is a quality or property of that belief, the working is a sign that it has the property or quality.[1]

Pragmatists seem rather to fence with this objection; but that, I take it, is partly because they do not wish the discussion to degenerate into mere assertion and counter-assertion, partly also because they are conscious of a sense (which is not that urged by the anti-pragmatist) in which there is a quite clear distinction between the meaning and the test of truth. James I believe would have dealt with this objection in substance (for in felicity of manner he is inimitable) as follows: If you please to assert that the truth of a belief is a quality of it distinct from its quality of working satisfactorily, I will not contradict you; but on my side I will assert that this quality, if it does exist, is indiscernible, never has

[1] Instead of "quality of that belief" he may say "relation of that belief to reality"; but it will presently be seen that in relation to the point in process of discussion the substitution would be unimportant.

been discerned, and apparently never will be. Neither you nor any one else has ever yet succeeded in giving an intelligible definition or description of it, though many eminent hands have tried since the dawn of philosophy. (This is evidently what is in James's mind when he beseeches his opponents to tell him what *their* truth is "*known as*".) Certain experiences give rise to a belief A, certain others to a belief B; these two beliefs in their turn respectively prompt certain expectations. You find that the expectations aroused by the belief A are, so far as you go, invariably fulfilled, while the expectations suggested by the belief B are not fulfilled at all. What difference have you discovered between the two beliefs other than that the one works and the other does not? Pragmatists cannot discover this other difference, they can form no conception of this quality in which *your* truth consists and it is therefore quite impossible for them to mistake another conception for it.

If this is the pragmatist's position the futility of arguing against it seems evident. You may call him "conception-blind" if you like, but he will only laugh and tell you that you are nursing an old, a very old superstition. It is clear also that from his point of view the distinction between the meaning of truth and the test of truth remains perfectly definite. It is sufficient to reflect that the meaning of a word is (to put it shortly) an idea, while a test is either an action or a process of ratiocination (*e.g.* the proof of a mathematical proposition); the idea of verification, of demonstration, of "working," is not the verification, is not the demonstration, is not the "working".

Rapidly turning over the pages of *The Meaning of Truth* on the chance of coming across any passages in it which might indirectly confirm the suggested interpretation of James's mental attitude towards the truth question, I come across these: "My account of truth is purely logical and relates to its definition only. I contend that you cannot tell what the *word* 'true' *means*, as applied to a statement, without invoking the *concept of the statement's workings*."[1] Again, ". . . for understanding what the word 'true' means as applied to a statement, the mention of such workings is indispensable".[2] Once more, "you cannot define what you mean by calling them" (*i.e.* statements and beliefs) "true without referring to their functional possibilities".[3] There is no ambiguity whatever here in the use of the words 'mean' and 'means'. Concepts have verbal signs, they are the meanings of those signs. It might indeed still be urged that these passages do not absolutely dispose of the charge of confusion, but this seems no longer possible when attention is drawn to the form which James gives to these assertions. Why does he put it that *you cannot tell* what the word 'true' means, as applied to a statement, without invoking

[1] P. 221. [2] P. 219. [3] P. 220.

the concept of the statement's workings, or without referring to its functional possibilities? Because he is convinced that between beliefs which work and beliefs which do not, you can discern no common difference but this of working and not working, otherwise expressed as the difference between true and false. He may be wrong about *you*, but that is here an irrelevant consideration.

It has been a frequent complaint of pragmatists that their opponents seek to confute them without first seeking to understand them. There would seem to be some ground for the complaint, and so long as this remains the case the sympathies of the unpartisan onlooker are likely to go out to the pragmatist. If pragmatism is gaining ground, as it seems to be doing, this may in part be because, as Mr. Russell says, "it is singularly well adapted to the predominant intellectual temper of our time,"[1] but it is in part due also to the apparent prejudice or the surprising lack of insight with which it has been opposed. Next to the leaders of pragmatism it would seem that no one has more effectively contributed to the spread of that philosophy than the militant anti-pragmatist.

HASTINGS BERKELEY.

[1] *Philosophical Essays*, p. 88.

TRUTH'S " ORIGINAL OBJECT ".

In his article " On Some Aspects of Truth " (Mind, July, 1911, p. 332) Mr. Bradley observes: " On any view like mine to speak of truth as in the end copying Reality, would be senseless. To copy is to reproduce in some other existence more or less of the character of an object which is before your mind. Now apart from knowledge and truth, there can be no original object before you to copy. And hence to make truth consist in copying is obviously absurd." And he regards this question as settled by the " post-Kantian criticism of the doctrine of the Thing-in-itself ".

Now a truth-hypothesis, genuinely thought-out, takes us to metaphysics. And in commenting on this passage we must recall Mr. Bradley's own metaphysics—bear in mind what he has said about the nature of reality at large. He does not follow certain Hegelians and identify Truth with God. He disallows an " eternal consciousness " by which truths are thought and which has no content apart from truth and thought. But, nevertheless, Truth is a colossal fact in his universe. Truth, while not God, is an aspect of the Absolute Experience, " the whole Universe in its general character as it really is ". We philosophers are cognising this aspect with varying degrees of success. And, time being unreal, we must be awaring, rather than making, the Truth-system. And so must be all the finite centres in which the Universe realises itself as truth. Again, outside and apart from these finite centres, human and other, there is no truth-realisation. The finite centres, as harmonised in the Absolute, are Truth's sole carriers.

Truth is not a possession of this or that individual, it is an aspect of the Absolute Experience—this is the dominating metaphysical assumption which confronts us here. In " the original object " present to finite centres there lies already in some occultly implicit manner knowledge and truth. For the moment let us pass this statement. Does the description of acquired truths as " copies " necessarily become absurd ? Of course such truths will not " consist in copying," as process. They (or rather many of them [1]) will be copies and the awareness thereof. A geologist or geographer, for instance, might very well be said to " copy "

[1] A great many truths cannot be discussed intelligibly as " copies " at all. Often we aware the truth directly in the reality of which it is affirmed.

certain truths of the independent system of truth which are displayed in Nature. Anyhow there is no intrinsic absurdity in the contention that truth externalised as Nature could give rise to secondary or derived "truths" in finite centres. We could well be supposed to *reproduce* parts of a system in our private concepts and in this sense to "copy" much at any rate of that which is cosmic truth.

The special difficulty in the case of Mr. Bradley's system is that he does not allow that truth and judgment exist apart from finite centres. Consequently both the primary cosmic truth and the derived truths would have to lie in the same centres. And since further, on his own showing, truths, as finites know them, are never completely true, he seems to drift into sheer chaos. Of course the reply will be that the Absolute is there to see that this chaos is really harmony. And there are folk, it would seem, whom this reply suffices to content.

But waiving this objection, I pass to more vital considerations. And first I must advert to Mr. Bradley's abuse of the "post-Kantian criticism of the doctrine of the Thing-in-itself". His attitude is —Either accept this fiction or agree with me that cosmic reality, in its general aspect, is truth. But we are not limited to these alternatives. The mark of the idealist is the view that sentient experience samples the stuff the universe is made of. And the idealist may reject belief in unknowable surds or things-in-themselves without at the same time overrating the position of truth. He may regard truth as no more than appearance in the time-process, as one of the *transformations* of the universal psychical life as it wells up in finite centres. This universal plastic life is what I have discussed as the Cosmic Imagination. And the word 'transformation' has special relevance to the controversy in which we are now engaged.

If asked what I have to say regarding Truth, I am forced first to state my metaphysics, failing which there is no understanding the "reality" which Truth, as ordered in a propositional system, is "about". And I should first substitute for Mr. Bradley's static Absolute Experience an Intuitive Alogical Imagination with its Days of change or time-succession and its Nights of changeless fruition. In the change-phase of our present Evolution-Era there have arisen in this Cosmic Imagination certain organisms, aspects of which (in our case the cortex) have passed into isolated 'centres' of conscious being. Let us consider specially the human finite centre. Owing to the fact that my conscious life is allied directly only with the cortex, I am confronted with a 'shadow world'; my surroundings in the Cosmic Imagination being barely notified by the dynamic of cortical process.[1] "My experience falls within

[1] I have endeavoured to show how space, time-succession, and order arose in the Cosmic Imagination. The shadow-world which I perceive must be most inadequate to the fulness of content in this Imagination.

my own circle, a circle closed on the outside," as Mr. Bradley would say, and the limits of that circle are determined by the brain; not by the "shadow-brain" which is all that the physiologist can perceive, but by the fully-concrete brain as it exists in the macrocosm or Cosmic Imagination. Within this petty circle takes place the evolution of subject and object and all that in them is. And for me the resulting experience is, at the outset, all in all. But since the so-called 'closed circle' is continuous, and of one tissue, with the enveloping order, and since that order is revealed indirectly by what it works in the circle, I am enabled, slowly and surely, to feel my way in idea out of the circle as practical and theoretic interests dictate.

Psychical happenings in the continuum of the Cosmic Imagination permeate the minor continuum or circle in which I appear. No need to have recourse to 'categories' wherewith to show how "reason" confronts me with an objective world.[1] The dynamic of this world-presentation seems alogical. No need to ask whether my knowledge 'makes a difference to' objects or not? Judgments imply attention, and the selective attention and the minor continuum in which selection rules are alike gifts—gifts of the Cosmic Imagination working through brain. It is only after 'outward' and 'inward' have settled into shape that the Centre as such can be said to begin to act. At first it is "run" by a dynamic of which it holds just the result. Its sensations, volitions, emotions, etc., are the surface of activities that are working below its level.

On these lines, then, "*the original object*" is not truth. Truth is one of the novelties of which the creative time-process is so full. The content of the minor continuum, as selected, appropriated, hived and re-arranged is taking on a new form. But the *transformation* is very gradual. Thus, at first, truth is still immersed in its "reality". At the outset Judgment does not even "*refer* an ideal content to reality"—there is just awareness of the content *in* reality, a partial awareness of fact over against a twilight background. At the farther end of the scale you have the philosopher's truth; a conceptual system, a bleak artificial arrangement of propositions which acquires a kind of standing of its own, being indeed an ideal substitute for a universe which, in its entirety, cannot fall within finite experience. If we want to verify portions of this system we have to ask how far its propositions agree with reality—have to bring truth *towards* that for which it stands. At this stage, and indeed in connexion with all conceptual or representative thought, the Correspondence-Hypothesis seems to hold—the dualism of truth and fact has reached its full development.

The defects of a truth-system, as embodied in propositions, are

We are like Plato's folk in the Cave—save that the superior world consists not of empty "Universals," but of richly sensible reality (*cf. Individual and Reality*, p. 159 *et seq.*).

[1] *Individual and Reality*, p. 180.

serious. The philosopher is a splendid pauper. His mental substitute for awareness of reality at large is too empty. He has grasped at a universe and his hands close on too little. May we not hazard the surmise that Truth, after attaining a certain development, has to give place to a superior form of knowledge? The individual, who cannot disappear in the time-process, grows through the ages towards a larger life in which a direct and completely concrete awareness has to replace conceptual Truth. But I cannot dwell on this fair possibility. And, of course, there are many other aspects of the Truth-controversy which I am ignoring here.

E. D. FAWCETT.

P.S.—With reference to Mr. Bradley's note (MIND, July, p. 335), I ought to say that I have not taken him to start from a "provisional Solipsism". I am not at all clear as to what his book *Appearance and Reality* does start from. It opens in startling fashion with chapters on "Primary and Secondary Qualities," "Substantive and Adjective," "Relation and Quality," and, plunging into the discussion of Space and Time, works thence in no clearly methodical way toward Absolutism. I start from a "provisional Solipsism" (subsequently found absurd) because so many ways of starting have been condemned that I wish to take as little for granted as possible. Now Mr. Bradley admits that "my experience falls within my own circle, a circle closed on the outside". Only so far as I know my own experience directly, can I know of anything else. And the "anything else," I suggest, remains always at the best theoretically doubtful. In the result I agree with Mr. Bradley that the finite centre is continuous with a larger order which penetrates and, as he would say, "infects" its being. But this is a conclusion which I do not care to assume, and towards which I have to argue.

Mr. Bradley himself has to show that his Absolute is not merely a concept *within* his "circle". The task, it is obvious, is no light one. For it is certain, as he observes, that the "highest all-embracing experience is never reached in any finite mind". Nevertheless he believes, "inexplicable" as is the truth, that the "whole Universe" is directly aware of itself in his circle.[1] In other words, the Absolute finds itself in him, although, taken apart from other finite centres, the Absolute cannot be real and although Mr. Bradley's entire experience is more or less unreal. Certainly this is "inexplicable". And a question arises whether it is not something worse.

[1] "But so as not there to be aware of the contents of any other finite centre *as they are experienced immediately by itself within that other centre.*"

VII.—CRITICAL NOTICES.

Die Philosophie des Als Ob. System der theoretischen, praktischen und religiösen Fiktionen der Menschheit auf Grund eines idealistischen Positivismus, mit einem Anhang über Kant und Nietzsche. Herausgegeben von H. Vaihinger. Berlin, Reuther & Reichard, 1911. Pp. xxxv, 804.

This impressive work has had a remarkable history. The first part (pp. 1-327), containing the systematic discussion of the conception of 'fiction,' was written so long ago as 1876; part 2 (pp. 328-612) dates from 1877-8 and contains the special illustrations; part 3, a citation of passages from Kant, Forberg, F. A. Lange and Nietzsche, is based on collections made in 1875, but has been added to since, and contains also some references to current controversies. There are, moreover, two Prefaces, one signed by Prof. Vaihinger as the 'editor,' the other (unsigned) by the 'author,' who is not stated to be identical with the 'editor'. This curious fact, together with the abundance of misprints and the absence of any attempt to bring the contents of the work up to date, is no doubt connected with the distressing malady of the eyes which, to every one's regret, kept Prof. Vaihinger away from the Bologna Congress of Philosophy, to which the book is dedicated. It was clearly a case of publication now or never, and in the form in which the material existed or not at all, and Prof. Vaihinger is certainly right in thinking that the learned world would rather have so valuable a work in an imperfect form than lose it altogether.

The second Preface serves as an introduction to the whole argument by formulating as its central question the problem of *Fiction* and asking *how is it possible that with ideas known to be false we can yet attain right results?* and by explaining why its publication was so long delayed. Prof. Vaihinger explains, quite frankly, that he did not *dare* to publish it before, whereas now four influences have paved the way for it, *viz.*, the growth of Voluntarism (Paulsen, Wundt), the biological theory of knowledge (Mach, Avenarius), the popularity of Nietzsche, and the rise of Pragmatism. The whole passage is most instructive, and throws a strange light on the vaunted *Denkfreiheit* of the German universities. Here we have an extremely learned, highly scientific work, which if it had appeared thirty-five years ago would indubitably have made an epoch and enormously accelerated the progress of philosophy, deliberately

suppressed by its author, not because he feared deprivation or official censure (as many German philosophers have done in the past), but because he shrank from the odium of setting right the dominant dogmatisms of his colleagues! Why, this is quite as bad as anything we have elsewhere. But Prof. Vaihinger's avowal shows, not merely that *courage* is one of the great intellectual virtues (though his book is a sufficient proof that he himself has no lack of it), but still more that dogmatism and intolerance are as deadly enemies to science when they are found in university professors as in state-officials and that there is something gravely wrong, from a social point of view, in any system which produces these vices and gives them such opportunities.

However, we ought to be glad to have at last got Prof. Vaihinger's work, which is, as he says, the first systematic treatise on the epistemological function of *Fictions*, and considers its subject exhaustively in its scientific, ethical and religious aspects and with copious, and often recondite, illustrations from philosophic history. Incidentally it involves a new interpretation of Kant, which is regarded as the most *radical* form of Criticism, and as the secret doctrine of Kant himself in his more enlightened (or bolder?) moments, though Prof. Vaihinger of course knows Kant and his ways far too well to pretend it is the only interpretation and the only doctrine to be got out of his contradictory pronouncements. For this new 'Kant,' whose genuineness and truth to some at least of Kant's moods Prof. Vaihinger's quotations seem convincingly to establish, Prof. Vaihinger's great *Commentary* and his position as the foremost '*Kenner*' of Kantian philosophy, will no doubt secure a respectful hearing, and the thorough discussion the German 'Kant-philologers' love, while it may also be a check on the attempts to turn Kant into a dogmatist which are so popular in other quarters. Thus here again the maxim holds that every new philosophy involves a new 'Kant'. But Prof. Vaihinger, though he is proud of his Kantian inspiration and apparently holds that Kant was big enough to be allowed to contradict himself as he pleased and that it is 'Philistine' to deny him this right (p. 639), and though he must know how his Kantian lore must impress and overawe lesser men, and how interestingly it illustrates the amount of valuable thought which histories of philosophy commonly leave out, does not pose as a mere disciple. He has an eye to the absence in Kant of essential modern ideas, like those of value and of the teleological nature of thought (p. 191), and is conscious of going beyond Kant. The real core of his system, and its real merit, lie in the thesis he has raised about the nature and value of Fiction and its relation to Truth. With the results of this investigation he conceives his philosophy as taking its seat on the extreme Left of the philosophic pandemonium as an "insight into the necessity of conscious fictions as indispensable foundations of our scientific inquiry, our æsthetic enjoyment, our practical action"

which "enfolds with a common tie the differentials of mathematics, the atoms of physics, the Ideas of philosophy, and even the dogmas of religion" (p. xv.).

It will be seen that the scope of Prof. Vaihinger's programme is enormous, and to appreciate it it will be necessary to consider I. his notion of 'Fiction,' II. his list of 'fictions,' III. his relations to Scepticism, and IV. to Pragmatism.

I. He begins by conceiving the soul in the modern biological way as active and (in a way) creative. It follows that as thinking is an organic function, its aim must be *practical, viz.*, so to transform the material given by the senses that we can calculate the course of events and *act* successfully (chap. i.). All thinking therefore is *instrumental* (Dewey's word), and not its own end, and all thoughts are '*Denkmittel*' (pp. 95, 126, 181, etc.), and so 'fictions'. Thus the aim of truth throughout is, not a theoretic copying, or a comparing with reality, but a practical testing of the usefulness of ideas, so that "for a modern epistemological standpoint there can no longer be a question of 'truth' in the ordinary sense of the word" (pp. 5, 7). Thinking, being simply an instrument to find one's way about the world, which *substitutes* an ideal world for the real (pp. 22-23), has however to make use of *dodges* (*Kunstgriffe*) in order to attain its ends, and these are the *Fictions* which no science can dispense with.

Any departure from the given is 'fictitious,' though it is not necessarily a full-fledged 'Fiction'. The latter is distinguished from a 'semi-fiction' by the fact that it not only departs from reality and contradicts it, but also contradicts itself (p. 24). Indeed self-contradiction is "the most certain symptom of fictions" (p. 94). A 'fiction' is not however *intended* to express reality, and should be accompanied by this consciousness (p. 127). It should not claim to be 'fact' (p. 173). Thus a 'fiction' is definable "as any *conscious*, purposive but *false assumption*" (p. 130), or a "*scientific invention for practical purposes*" (p. 65). It should be sharply distinguished from an *hypothesis*, though they have been constantly confused so far. A hypothesis aims at representing reality and must not be contradictory; it claims theoretic value (p. 148), and (if it succeeds) produces understanding or real knowledge (p. 147), or explanation (p. 187). *Hypotheses* demand *verification*, and the rule for them is 'take the most *probable*' (p. 144): for *fictions* it is 'take the most suitable'. They can never be *verified*, because they begin by departing from reality (p. 152); what they require is *justification* by their usefulness; their value is practical and their fruit is successful calculation. They are in fact useful, fruitful and salutary 'errors' which contrast with sterile and harmful 'truths'. They may be called errors legitimated by their success (pp. 62-64, 190, *cf.* 143), and are heuristically indispensable. For all "*thinking is only regulated error*" (p. 217).

How is it then that, despite their logically atrocious character, they can work? Why simply because they are 'scaffolding,' destined to be taken down again (p. 147). So they do not affect the result. Also they are corrected, and compensate each other (chap. xxvi., etc.). And so perhaps in science, as in love, all's well that ends well.

II. So we might conclude, until we study the list of 'Fictions'. For hardly anything seems to escape Prof. Vaihinger's net. Keeping only to the big and fundamental notions of his list we find that he detects fictions in averages, mean-values, classifications, abstractions, types, symbols, forces, roots, individuals, atoms, things, qualities, faculties, universals, ideals, infinity, numbers, measures, (empty) space and time, and all mathematical notions, matter, the soul, substance, subject and object, duty, God, freedom, immortality, all 'absolutes,' all categories (which are only 'analogies'), induction, deduction, nay all judgment as such (chaps. xxviii., xxxv., especially pp. 138, 312).

When all these things have been added up, and subtracted from reality, 'what remains of the whole philosophic stock-in-trade,' the astonished reader may well ask, 'that is *not* a "fiction"?' Well, it would have been simpler to start with this remnant, or at any rate much shorter. For the only things that are not 'fictitious' transformations of reality, according to Prof. Vaihinger, are (1) the *flux of sensations*, which is the only thing *given* (chaps. xxxv.-xxxvii., etc.), (2) the *laws* of their succession (pp. 98-99), and (3) the fundamental *Formal Law of Identity and Contradiction* (pp. 124, 159). About the last two however Prof. Vaihinger does not seem at all certain (or consistent). On page 419 we are told that 'the law' also is in the end only an auxiliary idea comparable with the notion of species, which has been declared a fiction. Probably Prof. Vaihinger's meaning is that while the successions of events are 'given' and factual, their explanation by the notion of law is a 'fiction,' as indeed it can hardly help being, seeing that all the categories, including 'causality,' have been found to be fictions. Similarly on page 411 the Law of Contradiction is expressly said to rest on a fiction, and the whole of Formal Logic is called a system of fictions.[1]

III. Is what remains enough to redeem Prof. Vaihinger's 'positivism' from the charge of *Scepticism?* He himself would reject the imputation of such 'logical pessimism,' as he calls scepticism, and insists that his doctrine is the purest Criticism (pp. 294-296). Nor of course does he think that the presence of contradictions in thought is a reason for scepticism (p. 229). Still he rates highly the services of scepticism, and sees clearly both that the dogmatist's demand for absolute theoretic knowledge inevitably generates it, because it demands too much from our instrument (*cf.* H. G.

[1] And of formally invalid ones at that! For the ordinary syllogism commits a *quaternio terminorum* (p. 214).

Wells' 'scepticism of the instrument'), and because thought is *theoretically* a failure (pp. 309, 316). If however scepticism is extended to the *practical* function of thought, it becomes inadmissible: for it is not legitimate to doubt that thought attains its practical end of ordering experience. Practically moreover scepticism has to acknowledge the truth of our ideas (pp. 229, 232). It is clear therefore that Prof. Vaihinger's rejection of scepticism rests entirely on pragmatic grounds.

IV. So does a great deal of the rest of his doctrine, though it is by no means easy to expound his exact relation to the views which are more or less accurately described as 'pragmatism'. There are indeed a large number of coincidences between Prof. Vaihinger and the pragmatists both as regards general philosophic attitude (he is an empiricist and rejects apriorism), epistemological principles, the details of his criticism of the traditional views, and even points of phraseology and illustration. To particularise the capital points, we may refer to his acceptance of the biological conception of knowledge and of its function as a means to action and the alteration of reality (pp. 93, 123, 176, 307, etc.); his conception of thought and its products as instrumental (pp. 22-23, 82, 88, 95, 126, 179, 232, 294, 310, 407, etc.); the emphasis on its purposiveness and convenience, irrespective of its 'truth' (pp. 132, 136, 215, 298, 305, 310, 406); the rejection of the ideas that thought aims at a *theoretic copying* of reality and not at *practical agreement* (pp. 5, 7, 93, 295), and is its own end (p. 181); the recognition of a process of selection and of a struggle for existence among ideas which is decided by their value (pp. 77, 101, 135-136); the perception that 'truth' is a *departure* from 'reality,' which attains its end although it apparently *falsifies* (pp. 288, 296); the proviso that both 'hypotheses' and 'fictions' must be validated by their working (p. 150); the recognition of the close connexion between truth and error, which leads him to subsume *both* under the notion of a means for calculating the course of events and to distinguish them as successful and unsuccessful means (pp. 193, 45, 136, 143). It would be difficult to quote from the most thoroughgoing pragmatists any dicta which go further than *e.g.* these, that "the proper purpose of thinking is *not* thinking itself and its products, but action and in the last resort *ethical action*"[1] (p. 93), that "the *first aim of logical thinking is practical*, logical functioning is a means to self-preservation. *Cognition* is only a secondary purpose, *in a way only a by-product of logical functioning*"[1] (p. 307), that "that idea is TRUE which fulfils the purpose of all thinking best"[1] (p. 136), that "*truth is merely the most suitable degree of error*"[1] (p. 193), that "cause and effect is only the abstract expression for *will and action*"[1] (p. 317); while probably no critic of Formal Logic, not even Hegel, has ever gone so far as to assert that "logically contradictory

[1] Italics the author's.

conceptions are precisely the most valuable" (p. 92), or that universals are "logically useful because they are logically impossible" (p. 410).

This ultra-pragmatism is not however the whole story. There is another side, or another mood, to Prof. Vaihinger, which does not fit in so well with pragmatism. It begins with what in view of what is coming seems an unfortunate remark in the Preface (p. x), distinguishing between 'critical' and 'uncritical' pragmatism and condemning the latter as "an epistemological utilitarianism of the worst sort" which renders philosophy "once more an *ancilla theologiæ*" or even "a *meretrix theologorum* outright". It seems like an allusion to this view when it is said (pp. 760-761) that the sound Kantian doctrine of a 'double truth' has been 'corrupted' by American pragmatism which has entirely dissolved the scientific notion of truth in the relativity of the religious conception of truth. What renders this censure particularly puzzling is that according to Kant and Prof. Vaihinger himself the doctrine of the double truth allows, and even enjoins, a very elaborate system of theological make-believe, whereby those who do not believe in God or freedom or immortality are to behave *as if* they did believe these "useful, and *therefore legitimate*,[1] necessary fictions of mankind" (p. xv). Here the difference between Prof. Vaihinger and 'uncritical' pragmatism would seem to be merely that the former calls 'false' the indispensable beliefs which the latter calls 'true,' and as the former admits a *double* sense of truth and not infrequently calls the practically 'true' fictions true without reservations (*e.g.* p. 136, *l.c.*), this difference would hardly seem to warrant severe language. However their real explanation would seem to be that Prof. Vaihinger's denunciation of 'uncritical' pragmatism was not intended for any of the pragmatist philosophers, but, as he informed me, for certain theologians of his acquaintance, while so far from objecting to the genuine pragmatism, he long hesitated whether he should not call his own position 'critical pragmatism' rather than 'critical positivism'.

There can be no doubt that he comes very near pragmatism; but his final choice was probably a right one. For there are still to be mentioned doctrines of his which seem incompatible with pragmatism in any strict sense. Among these is the duplicity of truth as 'theoretic' and 'practical,' which leads him usually to deny the title of truth to any 'fiction' however valuable and indispensable, and forces him to admit the existence of harmful 'truths' and fruitful and beneficial 'errors' (p. 64), to disallow the inference from successful working to theoretic truth, and from 'subjective' necessity to objective reality (pp. 190, 327, 404, 603), to condemn any alteration of or departure from reality in a fiction as a falsi-

[1] Italics mine.

fication (p. 194), to deny that a 'fiction' ever attains the real (p. 449), and generally that it is possible to unite the good, the true and the real.

It is the paradox of combining these views with his pragmatism that renders the psychological strain of Prof. Vaihinger's position so severe, and explains why not even an acrobat like Kant has been able to take his stand consistently on the painful razor-edge of the 'philosophy of the *as-if*'. Indeed if Kant had been gifted with a sense of humour he would forthwith have abandoned the 'standpoint of the *as-if*' rather than write down the delicious passage Prof. Vaihinger quotes from his *Lose Blätter* (*? Fliegende*), "a reasonable man, when engaged in prayer, assumes miracles; but when engaged in business, he admits no miracle" (p. 719). In spite of its paradoxes however the position is widespread; it is, as Prof. Vaihinger shows, essentially that of Nietzsche, who suggests that the value of all things consists in their being false, that one ought to believe in God, not because he is true but because he is false (p. 789), and it underlies the popular distrust of the truth as probably painful and men's love of consoling falsehoods which they can pretend to believe.

However paradoxical and unnatural this belief may be psychologically, its logical genesis is quite clear. It arises from the retention of the empty intellectualistic notion of truth after the discovery has been made that actual truth does not conform to its model. If instead of declaring that this 'ideal' is void and meaningless, and that the abstract notion of truth must accommodate itself to truth's actual nature in the concrete, the former is regarded as the higher kind of truth, and called 'theoretic,' and the latter is disparaged as 'only practical,' the doctrine of a double truth must follow, with all its consequences. But it is a delusion of those who adopt this position to imagine that they *have* discarded the 'copy' theory of truth. Really they remain enslaved to it, though they have found out that it is useless. But for their continuing to think it the business of truth to copy (or represent or reflect) reality, although it plainly does not in fact either do or attempt this, there would be no reason to dub our practical procedures 'fictions'. It is interesting that on one occasion Prof. Vaihinger seems to see this. He says (p. 94 *s.f.*), "it was only an accommodation to the ordinary view when we provisionally took up the position that the ultimate aim of thinking is the cognition of the real". But if 'theoretic' cognition is *not* the aim of thinking, and if 'copying' is neither possible nor attempted, what harm is there in its 'departing' from the given (which admittedly is only a chaos), and what sense in calling it a 'fiction' for so doing?

The truth is that Prof. Vaihinger's ingenuity, in detecting fictions everywhere, overreaches itself. He leaves no 'facts' to be contrasted with his 'fictions,' and in consequence the latter become facts

optimi juris, and their procedures 'truths'. A discussion of his notion of Fiction will speedily reveal this.

If we consider the denotation and connotation of the term fiction in Prof. Vaihinger's use we notice that both are very wide. On his own showing the only thing that was indisputably *not* fictitious was the flux of sensations (p. 96).[1] Yet nothing is more clearly an *ens rationis* created for purposes of psychological analysis. We never actually experience 'sensations'. Our actual experiences come as *perceptions* of things and their qualities, and these are never 'pure' from admixtures derived from our past, our knowledge and our personality. It seems quite untrue to say even that our organs of sense have the capacity or the function of reproducing undistorted 'fact'. They select and they transform in myriad ways. and are themselves the creatures of past selections, choices and valuations. For are not the organs of every living being adjusted (more or less perfectly) to his mode of life? And was not that mode of life selected and chosen in preference to others, or to non-existence? Our very 'sense data' (if we will insist on talking about such figments) are therefore pervaded ineradicably by past valuations, and choices, ideas and ideals; and if such pervasion is called corruption, *all* are hopelessly 'corrupt'.

Or again, how is a *real* 'sensation' to be discriminated from an illusion, hallucination or dream? It would puzzle Prof. Vaihinger to assign any other criterion than its superior *value*. But value to him spells 'fiction,' and so his 'sensations' must stew in the same broth with the rest of our cognitive procedures.

But the very universality of 'Fiction' throws a profound doubt on the propriety of the term. It no longer serves to discriminate one thing from another in the epistemological hotch-potch.

After all does 'fiction' connote more than 'mental activity'? That certainly is all-pervasive, and the sooner all philosophers see this the better. But do we *want* to do without it? If not, why abuse it as 'fiction'? If everything that can be called truth can also be called fiction, the difference in the meaning of the two terms has disappeared. Nothing is gained, therefore, by extending the sphere of 'fiction' in this way. It is better to discriminate, nor is such discrimination either difficult or inferior in convenience.

I should prefer, therefore, a classification which distinguishes between *methodological* and *categorical* assertion among the manifestations of human cognitive activity. Methodological assertion implies merely a recognition of the scientific value and convenience of the assertion, irrespective of any future decision as to its ultimate status. What is now asserted for methodological reasons may or may not turn out to be acceptable as a statement of scientific 'truth,' it may or may not maintain itself either as a 'truth'

[1] The fictitiousness of 'law' he himself admitted, while the Laws of Identity and Contradiction are not only 'fictions' but actually *meaningless* fictions in their Formal version (*cf.* my *Formal Logic*, chaps. x., xxiv., § 5).

or as a 'convenience'. Methodological assertion thus does *not* exclude categorical, nor does it involve 'fiction'. A 'fiction' should be regarded as a special case of methodological assertion which arises later, when the limits of its usefulness have been discovered, and it is seen to be impossible to claim full 'truth' for it, though its original usefulness still persists. Thus a *methodological fiction* is true and useful for certain purposes, but *known* not to be either for others. It thus expresses a further stage of scientific analysis than the *methodological assumption* which asserts merely the immediate value of an idea, and leaves its final status an open question. It can hardly be denied that such a position of a scientific doctrine is logically intelligible and psychologically common.

It should further be noted that neither of Prof. Vaihinger's criteria of 'fiction' seems to be adequate. The mere fact of our 'supposing a thing to be true' does not turn it into a 'fiction'. For we may 'suppose' it in quite a neutral way, and go on using it without defining it further, and even have no repugnance to discovering that 'after all it really is true'. *I.e.*, the phrase covers 'methodological assumptions' which are *not* 'fictions'. Nor again is the state of our consciousness decisive. We may suppose ourselves to be merely entertaining 'fictions,' and yet find to our delight that they were much more. Even the sciences sometimes entertain angels unawares, and, if it be not too irreverent, allusion may also be made to 'the old priest of Peru who *dreamt* he'd converted a Jew, and awoke in the night in the deuce of a fright, *and found it was perfectly true*'. In short some 'dreams' are 'veridical,' and some prophecies 'come true'. Even the 'atom' Prof. Vaihinger is so contemptuous of has, since his book was written, obtained some support for its claim to be a real physical entity from (the interpretation of) 'radio active' phenomena. It cannot therefore be argued that because a conception begins its scientific career as a 'fiction' it remains one, and 'can *never* attain reality'. Departure from the 'given' is *not* the differentia of 'fiction,' because it is essential to *all* cognitive activity, and the inquirer's consciousness of fiction is no proof of it, because it is primarily only a psychological fact about his state of mind.

Now *the knower's state of mind* no doubt deserves far more study than philosophers have yet bestowed upon it, and Prof. Vaihinger also might advantageously have carried his analysis of the mental attitude of *using fictions* further. In particular the notion of the fiction's *working* might have been more detailed. For it does not seem to be the fact that a fiction, consciously recognised as such, ever 'works' and is useful as such. It is necessary to ask *as what* does it work, *qua* the element in it which is known to be 'false' or *qua* its 'practical' truth? Also, *for whom* does it work, for those who recognise it as a fiction, or for those who believe it to be true or at least *half* believe this or believe it at times?

Now (1) in the case of the fiction consciously used by a scientist

it is clear that its value depends on its truth, which is adequate for his purpose. To conceive a curve as a straight line and to construct a railway carriage to convey a certain number of men of 'average' weight is 'true enough,' because the 'errors' committed may be made infinitely small or assumed to compensate each other. Thus the term 'fiction' does not mean that the conception is 'false' throughout (in which case it would be a bad, useless and pointless fiction), but that its truth is known to have *limits*, beyond which it breaks down. It is not an 'absolute' truth for all purposes, and differs from ordinary truths in this that the limits of its applicability are definitely known. But it is in virtue of the 'truth' in it, and *not* in virtue of the (negligible) 'error,' that the 'fiction' is scientifically valuable. It is then an insufficient analysis first to call the whole structure a 'fiction' and a 'useful error,' and then by way of compensation to admit that it has 'practical' but not 'theoretic' truth. *All* truth is 'practical' in the sense of 'relative to some human purpose,' and the adjective is pleonastic. And error is not useful *qua* error. The philosophers who have difficulty in seeing this should sharpen their wits on an analysis of *the common lie*, which, though really more complicated, is analogous in that it too is a use of an assertion known to be false.

(2) This case of the 'lie' will also bring out how essential it is to an understanding of the working of 'fictions' that the persons *for whom* they work should not be ignored. For a 'lie' does not (normally) 'work' unless it is believed to be 'true'. The detected lie usually fails to influence those who have recognised it as such. Is not the case of moral and religious 'fictions' similar? Is it, *e.g.*, possible to behave *as if* something existed, while one is fully aware that it does not? Is it possible to pray to a God whom one believes (at the time) to be non-existent, simply because one recognises that if such a God existed it would be a good thing? What is it but self-deception to pretend that one can? Prof. Vaihinger might just as well commend the æsthetic value of acting *as if* fairies existed, or the economical propriety of curing the distresses of poverty by acting *as if* one were a millionaire. Yet those who followed his advice would manifestly qualify for lunatic asylums.

Clearly the working and the usefulness of moral and religious fictions must be understood differently. The persons who think them 'fictions' must *not* be identical with those who find them salutary, because they think them 'true'. The enlightened philosopher (or priest) who knows that there is no God, no freedom, and no immortality, will act '*as if*' there were by continuing to teach these doctrines *as truths* with his tongue in his cheek, because he judges them salutary for the preservation of social order and his own authority. He will say, *populus vult decipi*, and it is my duty (or at any rate my advantage) to deceive them. This is a more prosaic explanation of the 'working' of moral and religious fictions. It is likewise an old, old story that the rulers of mankind have always

believed, and often found, fictions 'useful' in this way. It is also the reason why intellectualists are so firmly convinced that truth (like liberty) is *not* a good thing, at all events for all but the very few. *But it is not pragmatism,* nor an improvement on pragmatism. It is a traditional bit of immorality in moralists, of untruthfulness in truth-seekers, which pragmatism has come into the world to abolish. And Prof. Vaihinger should really explain himself further as to how he conceives the 'usefulness' of 'fictions'.

It is to be hoped that he will adopt the course which both reason and morality demand; *i.e.* that he will drop the notion of a 'double' truth, which he cannot consistently hold after abandoning the belief that truth is intended to 'copy' reality, and deny that *in ultimate analysis*[1] there can persist a discrepancy between the true and the useful, and a conflict between the good and the true. In other words he ought to become a Humanist; but of course he cannot be compelled. The alternative is that he should become a sceptic, as all must do who have perceived the discrepancy between actual human knowledge and the 'theoretical' ideal of intellectualism, and yet refuse simply to cancel the latter, as a delusion, a misconception and an irrationality. But this scepticism, in which the rationalistic clinging to an 'absolute' truth which is visible neither in heaven nor on earth inevitably ends, is thoroughly arbitrary, superfluous and inconsistent. It is perfectly easy to get out of it by accepting the humanist conception of truth which we all use in all our thinking. The sceptic himself is quite incapable of disavowing it in his life; for though he professes to despise it as 'practical,' he has to use it in order to continue to live. If he were consistent he would speedily eliminate himself, by not thinking one thing *practically truer* than another.

This brings us to a curious fact which despite its goodly bulk neither Prof. Vaihinger's work nor this inordinately lengthy review (which is a tribute to its merits) has so far mentioned, *viz.*, what is really the most puzzling case of the working of fictions, and the only one which presents any difficulty to the humanist analysis of truth. I mean the case of beliefs which are biologically so indispensable that they prove themselves by *eliminating those who refuse to hold them true.* A very large number of our least contested 'truths' may be suspected to be of this nature, but it comes out best in the extreme case of the belief that life is worth living. Clearly no one can deny this belief, *and act on his denial,* without eliminating himself and so indirectly establishing the truth of what he believes to be untrue. Yet if he did *not* act on it, both he and others would be led to suspect the sincerity of his 'merely theoretic' pessimism. We thus get a very puzzling antinomy, and one which

[1] Of course it is necessary to provide first for all the cases of the use of non-truths which render the 'simple conversion' of 'all truths are useful' impossible. See my paper on 'Error' in the *Proceedings of the Aristotelian Society,* 1911.

no doctrine of an *as-if* helps to solve. For all the time that pessimists were thus being eliminated, and so powerful a bias was being produced in the race as to render it *incredible* that life should *not* seem worth living, nothing that could be regarded as a *rational* argument would be urged against the pessimist position. The situation should be the despair of rationalism, and (as remarked) forms a very pretty problem even for humanism. Without however probing deeper into subtleties of which current philosophy hardly yet suspects the existence, we may conclude by emphasising that Prof. Vaihinger's book, in spite of the points that seem open to criticism, contains such a wealth of material and of stimulus that no one should henceforth presume to discuss the problems of logic and epistemology without having read and digested it.

F. C. S. Schiller.

Body and Mind: a History and a Defence of Animism. By William McDougall, M.B., formerly Fellow of St. John's College, Cambridge; Reader in Mental Philosophy in the University of Oxford. With thirteen diagrams. London: Methuen and Co. Pp. xix, 384.

This is undoubtedly a book of great interest and importance. So far as I am aware, there is no other in which the whole problem of the relations between body and mind is so fully and carefully treated. The fact that it is written by one who has specialised both in physiology and in psychology gives it a unique authority; and in many respects it may be described as masterly. Some may no doubt be inclined to regard its sub-title as indicating a defect; and I am not altogether prepared to deny that there would be some justification for such a view. It is an advocacy—and even to some extent a popular advocacy—of a particular theory, rather than an unprejudiced inquiry into all possible theories; and probably the term that is used to characterise the theory that is advocated will be apt—not entirely without reason—to provoke a certain amount of antagonism. To any careful reader, however, it must be obvious that, in spite of its strenuous and spirited advocacy of a particular doctrine, it is thoroughly judicial in its tone and singularly fair and comprehensive in its treatment of opposing theories. In the end, even those who set out with some preconceptions against anything that can properly be described as animism will be led to admit that the theory here advanced is at least a reasonable one, and that the arguments put forward in its support are weighty, well thought out, and not easy to refute.

The book begins with a historical sketch, showing the way in which animistic conceptions have grown up, the developments of thought by which they have tended to be discredited, and the considerations that have led to their revival in recent times. For this

part of his work Mr. McDougall does not claim any originality, and it is certainly the least valuable part of it. He does not appear to have always consulted the best authorities. The account, for instance, of the growth of early Greek philosophy seems to ignore some of the most recent views. Mr. McDougall evidently accepts without question the old tradition (rejected even by Zeller) that Protagoras was a disciple of Democritus (p. 16), and takes no account of the fact that most historians now believe Protagoras to have been a flourishing teacher when Democritus was a boy. The dates given are also a little confusing. Sometimes they are the dates of birth and sometimes those of active work. The omission of any reference to the Eleatic school is another rather serious defect in any account of the growth of Greek speculation. The account of modern philosophy is perhaps less open to criticism. It is somewhat confusing to find Spinoza dealt with as if he were subsequent to Leibniz; but in this case the departure from chronological order is at least pointed out (p. 57). More serious is such a statement (p. 74) as that 'Kant's attempt was, by combining the scepticism he had learned from Hume with the idealism of Berkeley, to achieve a position which might claim to reconcile and to combine in a higher synthesis all that was most vital in the opposed dogmatisms'. Surely the only relation of Kant to the 'idealism' of Berkeley was that he tried to refute it. He no doubt pointed the way to another sort of 'idealism'; but even of this he only had, as it were, a Pisgah-sight (as indeed Berkeley also had).[1] In spite of such defects, however, the account of the development of philosophical thought given by Mr. McDougall will be found useful and in the main reliable by non-philosophical readers.[2] But the main interest of the work begins after this introductory part is completed.

What follows is a searching inquiry into the various ways in which the relations between body and mind have been conceived, with the view of establishing the central thesis of the book, that there are only two main doctrines that are worth considering—that of Parallelism and that of Animism, corresponding broadly to a

[1] It is a great pity that these two meanings of 'Idealism' (unfortunately there are even more than two) cannot be definitely distinguished by using the term Mentalism or Subjectivism for the one and Spiritualism for the other. But perhaps it would be still better if labels of this kind could be dropped altogether. We seem to be nearly all idealists and nearly all realists, just as we are nearly all socialists and nearly all individualists. The difficulty is to know exactly what such terms mean.

[2] I might add that, in giving an account of the development of modern philosophy, it would have been well to bring out more definitely the fact that it was the Cartesian dualism, and the doctrine of 'representative ideas' connected with it, that gave rise to the chief difficulties with regard to the relations between body and mind; and that it was the gradual breaking down of these theories that made more satisfactory accounts possible. But Mr. McDougall cannot fairly be blamed for not fully bringing this out; since, if I understand him rightly, he does not himself believe it.

materialistic and a spiritualistic interpretation of the facts. The different types of parallelism are very fully explained with the help of simple diagrams. The scientific theories that have led to the rejection of animism and the acceptance of parallelism are then carefully set forth and dispassionately examined. In particular, the influence of the doctrines of the conservation of energy and biological evolution is very clearly brought out. The defence of animism follows, being sustained by considerations of a physiological and biological, as well as of a more purely psychological character, and also by arguments drawn from the results of 'psychical research,' reinforced by some occasional pragmatic pleadings. More purely metaphysical discussions, though not altogether ignored, are held in the background.

On many of the points that are thus raised—especially those that are more purely physiological and biological—I am of course hardly competent to express an opinion; and even on the others I offer the following comments with a good deal of diffidence.

It appears to me a little misleading to say that Parallelism and Animism are the only real alternatives between which we have to choose. This can only be maintained if the meaning of both terms is somewhat strained. If the terms are interpreted in a wide sense, there is no opposition between them. Among leading philosophers, it might even be urged that Leibniz is one of the most conspicuous supporters of them both. If, on the other hand, the terms are interpreted in a more rigid sense, it is surely possible to hold views that cannot properly be expressed by either. In general, it seems true to say that neither of these views can be maintained, in any very definite sense, except on the basis of a thorough-going dualism. A complete Monism can hardly without great strain adopt either view, except as a provisional working hypothesis—a sort of 'useful nonsense,' in Mr. Bradley's phrase—for the purposes of psychology. It seems clear that there cannot be parallelism, in any very intelligible sense of the term, unless there are two quite distinct things—or at least two quite distinct aspects of things—to be parallel to one another. Hence a pure materialism or a pure spiritualism can hardly recognise anything that can properly be described as psychophysical parallelism. But animism also, in the most definite sense in which it can be understood, seems to imply the operation of souls on other things that are not of the nature of soul; so that this also appears to be incompatible with any thorough-going Monism. It is, I think, largely for this reason that so many modern philosophers, as Mr. McDougall notes (p. 179)—especially those who have taken Kant as their starting-point—have tended to regard all such theories as antiquated.[1] I agree

[1] I suppose it is true to say also that such philosophers have been, in general, so much absorbed in the more fundamental problems of epistemology as to have but little time for these more special and detailed inquiries. This, I suppose, was what was meant by William James in calling their doctrines 'thin'.

with Mr. McDougall, however, in thinking that the acceptance of some form of Monism does not absolve us from the discussion of the general problem of the relation between body and mind. It is still necessary to consider how it is that modern physical science seems to offer a complete theory of the nature of body without reference to mind.

In this connexion it may be well to notice Mr. McDougall's contention that one of the advantages of the animistic hypothesis, as contrasted with that of psychophysical parallelism, is that it does not commit us to any metaphysical theory. The only theory, he tells us, that animism, as a psychological hypothesis, necessarily excludes is that of Solipsism. If so, we might well go farther. Surely Solipsism can hardly be dignified with the name of a theory. It is little more than a *reductio ad absurdum* of certain types of subjectivism. It only means that, according to certain theories, any assignable individual has no valid ground for affirming the existence of any other individual. But any one who really goes so far as this inevitably goes farther. He must add, like Hume, that there is no valid ground for affirming the existence even of the individual Self as anything more than a number of conscious states. If this is Solipsism, it is Solipsism without an *ipse*. It is, in short, scepticism—not a positive theory at all. And I hardly think it can be maintained that even this attitude is incompatible with either Parallelism or Animism, taken simply as working hypotheses for psychology. The sceptic or solipsist, like any one else, may very well recognise that it is possible in some sense to have a science of body and of mind as they appear; and he may regard the hypothesis of an active soul as a convenient working hypothesis for such a science; or he may think it more convenient to treat the two sets of appearances as parallel. Even Hume frequently refers to the 'soul' in this way.[1] Taken simply as convenient psychological hypotheses, it seems to me that parallelism and animism are much on a par, so far as their metaphysical implications are concerned. The one may be said to lean to materialism and the other to spiritualism; but both are most naturally interpreted in terms of dualism.

It seems to me, however, that we might go even farther than this, and maintain that the hypothesis of animism is not incompatible with that of parallelism. For animism may quite well, as Mr. McDougall allows, be interpreted in a materialistic sense. It simply involves an extension of our conception of the material system, similar to that which is involved in the recognition of the luminiferous ether.[2] We may suppose that there is within the brain some subtle form of extended substance which is the organ of the higher

[1] *Treatise of Human Nature*, book i., part i., sect. 7. 'The word . . . touches the soul'; 'Those very ideas that are thus collected by a kind of magical faculty in the soul'.

[2] Compare the etheric body (*Linga sharira*) of the theosophists.

forms of self-conscious life, which is capable of serving as a medium for various modes of telepathic communication, and which may even pass from one physical organism to another, and perhaps survive for a time apart from any connexion with a physical organism. Such a conception would, I suppose, be animistic. Indeed it seems to be what is commonly understood by animism. But the substance thus thought of would still be, in a wide sense of the word, material; and the question would still remain—How is this material to be supposed to be related to consciousness? The answer to this question might still be given in terms of Parallelism. It might still be said that the consciousness that goes with this substance corresponds to its structure and movements. Hence it seems to me that, even if we regard a special type of soul-substance as an established fact, we should not have thereby subverted the theory of Parallelism, and should only have extended our conception of the material system. It might still be maintained that the soul-substance, which would seem to be at least spatial, interacts with other material substances, but that consciousness remains as a thing apart, following its own laws of life and growth.

Now, it seems to me that the greater part, if not the whole, of the arguments adduced by Mr. McDougall, would lead only to the establishment of animism in this sense, and consequently would not be incompatible with parallelism or even with epi-phenomenalism. He urges, for instance, with much force, that we cannot point to a physical organ for the higher operations of consciousness, as we can for simple sensations and for the more mechanical types of memory. He urges also that the facts brought to light by 'psychical research' seem to require for their explanation something more than the commonly recognised forms of physical communication. There is much force in all this; but it may quite well be urged that it only points to the necessity for an enlarged conception of the forms of material existence and of the methods of their interaction. The question of the relation of all this to our actual conscious experience would still be a subject for further inquiry; and it might still be maintained that the connexion between them is not causal. Further, if we interpreted animism in this way, it is to be feared that it would not give so much support as Mr. McDougall seems to think to the doctrine of human immortality. The soul-substance might still survive the physical body, but its existence would be impoverished, and it would seem natural to suppose that, unless it found some new habitation, it would speedily deteriorate and become dissipated. Nor do most of the facts brought to light by psychical research[1] appear to lend countenance to anything much

[1] I refer of course here to the facts as definitely published. I am well aware that many people (of whom Mr. McDougall appears to be one) claim to have had personal experiences that cannot be thus interpreted. But, until these are fully brought to light, it is impossible to estimate either their value as evidence or the nature of the conclusions to which they point.

more than this. Hence I do not find Mr. McDougall's account of the support which Animism, taken simply by itself, would give to the higher aspirations of mankind, altogether convincing.[1] Most people, I imagine—to put it somewhat bluntly—would choose to go out at once like a candle rather than to linger on for a while as gibbering shades. And it seems to me that, even if we admit that animism, in some such sense as this, is fairly established by the empirical evidence, the great question—Interaction or Parallelism? —remains very nearly where it was. I admit, however, as I think every one must, that the recognition of such facts would place us in a better position for dealing with that question; and perhaps this is all that Mr. McDougall means to claim.

But he has yet another line of argument. We have already seen that he attaches considerable importance to what he describes as the theory of Solipsism. He refers to this pretty frequently. In fact, he appears to be haunted by it throughout the whole course of his work. He repeats over and over again that the only way of escaping from Solipsism is by means of the idea of causation; and I am inclined to think that this is the ultimate foundation for his faith in the doctrine of interaction. His view I take to be that, but for the recognition of some kind of interaction, we should be absolutely confined within ourselves. The following passage is the one in which this view is most definitely stated. 'We affirm that each of us can escape from Solipsism only by an act of faith or will that posits a real world, of which he is a member. This real world appears to each of us in the form of the phenomena of sense-perception; but, if he is not to remain a solipsist, he must affirm and

[1] In this connexion I ought perhaps to refer briefly to the use that is made by Mr. McDougall of arguments of a pragmatic type. Though perhaps hardly a pragmatist, I should gather that he has a distinct leaning in that direction. He makes it clear throughout that he attaches considerable importance to the consequences of his doctrines. In his Preface he states his belief that 'the future of religion is intimately bound up with the fate of animism'. He adds: 'I am in sympathy with the religious attitude towards life; and I should welcome the establishment of sure empirical foundations for the belief that human personality is not wholly destroyed by death. . . . It seems to me highly probable that the passing away of this belief would be calamitous for our civilisation.' Some may think that too much is made of considerations of this kind; and I am certainly inclined to the view that it is a pity to put them in the forefront of a scientific discussion. If such arguments were to become current, we might end by submitting the psychophysical problem to a Referendum. But it is right to add that the actual discussion of the question is little, if at all, affected by such considerations. Pragmatic arguments are introduced mainly as *argumenta ad homines*. It may be urged also that, even if such arguments should not weigh with us in forming our opinions, they may be of some importance in considering whether our opinions should be widely circulated or kept dark. On the whole I believe that, even the most strenuous opponents of pragmatism would recognise, on careful consideration, that he does not make any illegitimate use of the consideration of consequences of a definitely practical kind.

believe that these appearances are not created by himself, but are due to influences or existences, not himself, yet affecting him. Or, in other words, he must believe in the validity of the category of causation; for only by believing that his perceptions are caused by some influence, some real being, other than himself, can he escape from Solipsism' (p. 180).

Now, I believe this argument to be quite fallacious.[1] As I have already indicated, the importance attached by Mr. McDougall to the theory of Solipsism seems altogether undeserved. Solipsism is, as Mr. McDougall himself recognises, a manifest absurdity. As Edward Caird used to put it, the question How we are to get out of ourselves, raises the previous one, How we ever got into ourselves. The consciousness of self is no more immediate or direct than the consciousness of that which is distinguished from self. The unfortunate *cogito ergo sum* of Descartes has much to answer for; and though Kant dealt pretty faithfully with it in his *Refutation of Idealism* it continues to recur in philosophical speculation. I am afraid that the doctrine of Prof. James Ward—the unsatisfactoriness of which is recognised by Mr. McDougall—rests on the same foundation.[2] Yet it seems clear that we know colours and sounds and smells and space and time and many other things quite as directly as we know ourselves; and that, as soon as we attach any definite meaning to self at all, we are aware that we are not colours or sounds or smells or any of the other things that we thus distinguish. We apprehend a world of objects from the very first; and it would be just as reasonable to say There is nothing but smell, as There is nothing but self. Of course we may hold that the world of objects that we apprehend is, in some sense, Appearance or Maya; but then we may hold this about our own conscious life as well—as Kant, for instance, did. But we cannot doubt that we are somehow conscious, and that we are somehow conscious of a world. Surely then Solipsism may be ruled out of court. We know that there is a world of distinguishable objects. The only questions for us are, What are these objects? How are they related to the subject and to one another? What interpretation are we to put upon them? In dealing with these questions causation may be important; but it is not wanted to refute Solipsism. Solipsism refutes itself (as indeed Hume was pretty well aware).

On these grounds I am led to think that the defence of animism against parallelism is unsatisfactory. What is really wanted is something that will raise us above both, by refuting the dualism upon which they rest. It is the Cartesian dualism, born of the

[1] It seems clear that it could only be accepted in any case, as a pragmatic argument. The same remark applies to the corresponding argument as used by Descartes—*e.g.* in the fifth of his so-called 'axioms'.

[2] The fuller and more impressive form in which it has been recently set forth in his new *Gifford Lectures* does not appear to remove this fundamental defect.

cogito ergo sum, that is the source of all the difficulties. Now, an attempt might be made, and sometimes has been made, to remove these difficulties from the side of Materialism. It might be said that the error lies in not including enough in our conception of matter. Descartes really did his best to exclude everything but pure space from the conception of matter, as perhaps some of the Pythagoreans and Eleatics may be said to have done before him. Modern science does not follow them in this, but rather tends to think of matter as something capable of spatial movement, in accordance with certain ascertainable laws. But it might be urged that we ought to include more in our conception of matter. We ought to recognise qualitative differences as arising in it under certain conditions, and life and consciousness as being included among these. We ought to recognise, it may be said, that along with the persistence of that quantitative aspect of material reality which is called energy, there are constant transformations of its more qualitative aspects in accordance with certain laws. It might be said, for instance, that a flower really has a qualitative aspect corresponding to what we call its colour; and that the movements of plants may be affected—*e.g.* in the case of fertilisation—by the fact of their colour; and that the recognition of this need not interfere with the theory that the quantitative aspect described by the term energy is persistent. Further, it might be held that consciousness is one of the qualitative distinctions that belong to certain types of material being. A theory of this kind would represent the universe as all of a piece, and in that sense would be monistic, though no doubt it would also represent the Universe (if it could be so called) as a plurality of distinguishable qualities. If I understand them rightly, the views of some of our newer 'Realists' approximate to this. But of course the question might still be raised, whether such a pluralism is not capable of being interpreted in the light of some larger unity or systematic order. If so, it seems clear that such a unity or order would have to be interpreted as spiritual. I believe that a conception of this kind, if it could be worked out, would carry us beyond both parallelism and animism. But evidently it would have to be supported by arguments of a more definitely metaphysical type than those that are presented by Mr. McDougall.

It is the duty of a critic to criticise, and I have endeavoured to fulfil that function. I have tried to indicate various respects in which the book seems to me to be defective or unconvincing. What I have chiefly sought to urge is that a sounder epistemology and a more definite metaphysic are needed for the thorough discussion of the problems with which it deals. While I am in the way of fault-finding, I may add that it is disfigured by a considerable number of rather annoying misprints. But I wish to end, as I began, with an expression of my hearty admiration for this solid and in many respects convincing work. There are several important aspects of

it to which I have been unable to do justice within the limits of a review. There is a cumulative force about the arguments that are brought forward in it, which can only be properly appreciated when it is studied as a whole, and which cannot be wholly destroyed even by valid objections to particular statements. It at least makes out a very strong case for the adoption of animism as a provisional hypothesis, and contains many valuable suggestions towards its further interpretation. It is written throughout in a clear and vigorous style; and the arguments are driven home by means of copious and often very illuminating illustrations. It ought certainly to be read by every one who desires to appreciate the present state of knowledge on the subject. It should be recognised as a classic on that particular theme.

J. S. MACKENZIE.

Études d'Histoire et de Psychologie du Mysticisme. Les grands Mystiques chrétiens. HENRI DELACROIX. Alcan, 1908.

THIS book, as the author tells us, is not a sequel to his *Essai sur le Mysticisme Spéculatif en Allemagne au Quatorzième Siècle.* It deals rather with the experiences than with the theories of the Christian mystics, and is in fact a psychological examination of Christian mysticism as exemplified mainly in St. Theresa, Madame Guyon, and Suso. In preference to a wide field less thoroughly examined, the author seeks to base an interpretation of this mysticism upon a close analysis of leading cases, pre-eminent and yet typical. This plan is in accord with his attitude towards the subject-matter. For him mysticism is essentially positive, organic, synthetic. It therefore has its higher and lower, its complete and incomplete, forms. The great mystics represent a great mysticism, and with their help we can study the imperfect through the relatively perfect, the true import of often arrested tendencies by the goal which a few have reached.

And yet he differs from the theologians. "Nous croyons que les états les plus sublimes du mysticisme n'excédent point la puissance de la nature; le génie religieux suffit à expliquer ses grandeurs comme la maladie ses faiblesses" (p. xix). This sentence indicates well his position; a position which gives to his work a value and significance of its own. This should be acknowledged even by those who would have welcomed a more ontological interpretation of the facts. A writer who stands between the supernaturalists on the one side, and those who propound minimising solutions on the other, is excellently qualified, with the knowledge and penetration that M. Delacroix possesses, to test the resources and the limits of the psychological method. He sets out with the determination to respect the integrity of the facts. And, in so doing, he discovers a continuity, teleology, and constructive efficacy in the lives of the

great mystics which constrains him to relegate pathology to a secondary place. He listens with respectful, and even sympathetic attention, to everything that they have to say. As against Prof. Leuba's theory that the mystic trance is identified, after the event, with the notion of the Deity as mysterious and infinite, he remarks that St. Theresa " déclare fortement et à plusieurs reprises que la conscience de la présence divine est d'autant plus marquée que les états extatiques sont plus élevés et que l'obnubilation qui l'entoure, est plus profonde; à ce degré elle est fréquemment accompagné de connaissances plus particulières, de visions intellectuelles " (pp. 385-6).

The exclusion of supernaturalism together with a strict limitation of pathology means, of course, that the sub-consciousness rises to a position of extraordinary dignity and importance. " Une force que la Sainte appelle l'action divine, la grâce divine, et que la psychologie ramène à l'activité subconsciente, régle désormais l'afflux imprévu et involuntaire d'états riches et féconds qui lui apparaissent comme la réalisation progressive de la vie divine en elle " (p. 10). The inhibiting of sense and intellect releases the activity of this larger self. A central intuition displaces discursive thought and draws even the practical life into its orbit. It is by its own nature expansive (see p. 361). In the case of Madame Guyon, an organised and profoundly intelligent automatism supplants the multiplicity of local and particular reactions in the practical life.

The intuitions and automatisms of the earliest stage of the mystic career are followed by a period of stress and darkness which leads to the third stage, the final establishment of this central intuition which displaces the old ego-centric life, both in respect of cognition and in respect of volition. In this first stage the mystic has been thinking of his own enjoyment of God; he has lived from his own centre; his highest experiences have been occasional, not continuous and fundamental. The second stage, which detaches the mystic from these more superficial supports, prepares him for his establishment on the solid basis which he recognises, when it is reached, as his goal. This process, familiar to the student of mysticism, is studied by M. Delacroix in its organic integrity, as it could hardly be appreciated either by the narrowly naturalistic or the narrowly theological critic. Hence the emphasis falls, not on immediacy, but on process. The particular experiences, as the most thoughtful mystics themselves did not fail to see, are to be understood in the light of their effects. " Nous avons montré que les descriptions des mystiques permettent d'apercevoir sous l'immobilité cataleptique et l'obnubilation de l'extase, sous l'agitation inquiète et la dépression de la seconde période, sous le somnambulisme extatique de la troisième, les grands intuitions, de caractère intellectuel et affectif, qui vont s'approfondissant et se répandant, et une grande impulsion continue, cohérente avec elle-même et tenace, qui dispose la vie comme un inflexible et clair vouloir " (p. 342).

This, in a word, is the aspect of mysticism which determines the method and conclusions of these illuminating studies. And there is one essential feature of M. Delacroix' treatment of the subject that must be noted, for it is closely articulated with the conclusions just indicated. The Christian character of this mysticism is, for him, fundamental. "Malgré les apparences parfois contraires de l'absorption dans le Père, il est au fond le mysticisme du Fils. Il aspire à faire de l'âme un instrument divin, un lieu ou la force divine se pose et s'incarne, l'équivalent du Christ, et l'âme désappropriée et déifiée est entraînée par la motion divine aux œuvres du salut" (p. xiii). The progressive identification of action and contemplation is the very foundation of Christian mysticism (p. 251). But not only is this so. The particular traditional beliefs are not merely tolerated, but intimately adopted by this intuition that loses itself in the abyss of ineffable Deity. The assurance of their truth belongs integrally to that systematic self-expression which the intuition itself requires and attains to. No one of course would accept a creed on the ground of another's claim to immediate certainty. But none the less we are here brought to the verge of epistemology. The author's explanation (pp. 395-397) probably goes as far as any psychological explanation could go, but we only feel the more that Psychology, in these higher regions, becomes unequal even to the problems that start up on its own path. Yet let it be noted that he does not dogmatise against ontological explanations. In a letter to the Abbé Pacheu he explains his attitude perhaps more explicitly than in the work under review (*L'Expérience Mystique:* Jules Pacheu; pp. 305-307). He says that though it is not the business of Psychology to recognise or to deny the supernatural, yet it may be led to deny particular supernatural explanations. This is reasonable, but the instance he gives seems to overpass this principle: "Je me suis efforcé de montrer que, chez les mystiques, le progrès de la vie spirituelle était un développement interne, qui peut s'expliquer psychologiquement". But, setting aside the term "supernatural" which rather prejudices the issue, in what sense can Psychology be said to "explain" the *whole situation* exclusively of ontological theories? This is a different thing from its right to question the attribution of particular phenomena to supernatural irruption. He admits, however, that a further question lies beyond: that of the correspondence of the order of nature with the order of "grace," though he points out, that the conception of nature at which we arrive by positive methods will regulate our corresponding conception of grace. Still, though he himself holds his views without reference to any "positive religion," he considers that "les grandes œuvres humaines sont pénétrées d'un esprit et portées par un esprit qui dépasse chaque moment de l'humanité pris à part, et qu'il y a ainsi dans l'humanité un mouvement qui la dépasse: ceci pourrait être interpreté de façon religieuse".

On the whole, the ontological interpreters need not quarrel with

M. Delacroix. It is surely well to naturalise everything till Nature herself reveals her essential limitations and pleads bankruptcy. It is eminently satisfactory that the essential difference between him and them—for such there certainly appears to be—can be focussed at one point. Allusion has been made to the sense of direct assurance of the truth of specific traditional doctrines, because it is here that relations between the ontological and the subjective interpretation are most strained. Now, in the first place, it seems clear that Christian mysticism differs in kind from the Hindoo type, and that self-expression, both intellectual and practical, is necessary to its maintenance and development. This seems to involve a positive cognitive implication at the very heart of the central intuition; in other words, it is genuine intuition and not a form of mental stultification. Self-consciousness, as M. Delacroix understands it—with his admirable refusal to explain anything away—is, in the great mystics, essentially constructive. But the further question will always remain,—in what sense is *all* consciousness constructive? What are its materials? What is the scope of receptivity in all cognitional processes, especially when they reach new levels and minister to vital expansion? In any case most philosophers would ask him to recognise at least an x-object correlated to an intuition that, by his own exposition, is implicitly all-embracing and finds some sort of expression in discursive thought. Then the question arises, can we best conceive this x as a point or as a plenum? Both conceptions would suit its central and organising character. But the latter would also do justice to its more than tolerance of the individual's particular traditional presuppositions. For truth, in our finite minds, comes to its own by exclusion and selection. Our personal thought-systems are at once so divided and so mutually organised that we can only appreciate the deeper significance of obsolete forms of thought in so far as we separate it out and express it in terms shaped by the exigencies of our intersubjectivity. But the content of the mystic intuition, if once admitted to be implicitly intellectual, must be conceived as superior to this limitation. It must comprise the complete truth-equivalent of all errors. And its apparent sanction of some errors and superstitions would be explicable on grounds of its own nature, *i.e.* (1) that it is self-expressive; (2) that it so transcends the content of discursive thought as to be able to utilise, as veridical symbols, a quantity of religious data which philosophy can hardly handle at all; and (3) because of its personal character, can treat as negligible form much that, under the necessities of our common mentality, must be rejected as essential error. All this is quite consistent with the obvious truth that the intuition tends to react upon belief, within certain limits; and also that its relation to historic religion is not settled merely by showing that it is not essentially compromised by its apparent inclusion of particular dogmas that may not win our assent. But those who are most

disinclined to accept the theology of the Christian mystics may yet see, in the catholicity of their central intuition, a mark, not of its emptiness but of its fullness, a liberalism of the Infinite, beyond what the discursive intellect could afford or sustain.

Still, of course, the subconsciousness may serve as a working hypothesis. But, after all, its nature is itself a psychological problem, and though it certainly demands no definition at the outset, we may fairly criticise the transformation it undergoes through the use that is made of it. What is its relation to the personality? And what is the essence of personality? This latter question, surely, must be answered by self-consciousness in its completest form. Now in these mystics it was raised to a level of singular intensity and scope. The suppression of the Ego in the last period was the outcome of a process exactly the opposite of the Hindoo method. The second stage in particular reveals, as the author himself recognises, a fundamental bipartition of the content of the mystic consciousness; and its very essence lies in this: that the Ego, in all the completeness of its functions and depth of its concentration, lies on the dark side of the antithesis. The teleological principle is essentially outside it, over against it. A centre of consciousness as fundamental as we can conceive has formed not merely without including that principle, but by self-definition against it. Can we then maintain that this so-called subconsciousness—subjectively conditioned, of course—is essentially subjective and individual? Such considerations do not seem more philosophical than Psychology is obliged, in the long run, to become, if its terms are to retain a definite meaning.

Still one may accept the author's high estimate of the subconsciousness and of nature, as if it were merely a way of marking the limits of his discussion, though to him it seems to mean something more. And many will welcome it as against the minimising theories of other naturalistic exponents. Nature will find her correlative soon enough if she is not impoverished in her content.

A. R. Whately.

VIII.—NEW BOOKS.

The Vitality of Platonism and other Essays. By JAMES ADAM. Cambridge University Press, 1911. Pp. viii, 242.

THE charm which Dr. Adam knew so well how to impart to classical scholarship is deeply stamped on the six essays of which this posthumous volume is composed. For persons who, without being concerned with problems of minute criticism, wish to catch the essential spirit of Greek moral thinking, no better work could be recommended. It is popular throughout in the sense in which only the writing of a deep and original scholar can be popular; it gives us the results of a life-time spent on the study of Plato and the Stoics, especially on the moral and religious side of their work, without a trace of pedantry, and in a style of rare distinction. The first two essays, "The Vitality of Platonism" and "The Divine Origin of the Soul," will form to some of us the most inspiring part of the book. In the first the writer dwells specially on the same theme as he explicitly treats in the second, showing how fundamental the notion that "perfect humanity" *is* "perfect Godhood" is for Plato's thinking and how vigorously the conception has persisted, notably in Christian thinkers specially influenced by the Johannine ideas, and in such philosophical poetry as that of Wordsworth. Dr. Adam's felicity in illustrating "the greatest of philosophers" by our greatest of modern English poets, in fact almost suggests that it would be well worth while to make a fuller attempt to use Wordsworth systematically as an introduction to the study of Platonism. Of course, no two readers of Plato can be expected to agree about all details of interpretation, and I think I could show grounds for regarding Dr. Adam's view that the God of the *Timæus* is a personification of the "Form of Good," so that the "soul of the world," its Maker, and the model on which he makes it come to be all the same thing, not entirely satisfactory. Indeed, I should deprecate any application of the expression "soul of the world" to Plato's God. To us the phrase at once implies a kind of Pantheism, since our tendency is to think hazily of a soul as "immanent" in its body. For Plato, we must remember, the soul is always "transcendent"; it is a being, as the *Phædo* tells us, of a kind absolutely heterogeneous from and superior to the body which it directs and informs. Hence Plato might on occasion, as he appears to do in the *Philebus*, speak of God as being to the world what our souls are to our bodies without detracting a whit from the "transcendence" which orthodox scholasticism demands for God. However, as Dr. Adam explicitly admits the contrast between the "transcendence" of God in Plato and the "immanence" of God in Stoicism, no serious harm is done.

In the second essay the history of the doctrine that the life of the body is the sleep or death of the soul is traced down from Pindar, where it seems to appear for the first time in what Greek literature we possess, to

Plato and the philosophers. Incidentally it is gratifying to the present writer to find that Dr. Adam is much more willing to attribute the Orphic traits of the Platonic Socrates to the actual son of Sophroniscus than most of our modern writers on these matters. I could wish he had gone just a little farther on what I feel sure is the right line. Thus from the contemptuous way in which dreams are treated in the *Timæus* it seems to me not merely "probable," as Dr. Adam says, that the high value put on the commerce of the righteous soul with its God in dreams at the opening of *Republic* IX. is a piece of genuine Socraticism,—and also that Plato personally did not wholly sympathise with his teacher on the point.

The third essay, "The Doctrine of the Logos in Heraclitus," is, in the main, a polemic against Prof. Burnet's contention that the *Stoic* doctrine of the all-pervading divine λόγος is not to be found in the Ephesian. To some extent the polemic has now lost its point since, in the second edition of his *Early Greek Philosophy*, Prof. Burnet has modified several of the passages criticised. As his account of the matter now stands, a good deal of Adam's argument is obviated by these changes. And altogether I feel that the dispute is largely—if I may venture on so awful a pun—a verbal one. I do not feel sure that there is much material discrepancy between Adam's account of the thought of Heraclitus and Burnet's. As to the mere point of language, Adam has not convinced me that λόγος in the Heraclitean remains ever needs to be rendered by anything but "discourse" or "account," and one of his instances, in particular, seems very unhappy. The remark of Heraclitus about Bias of Priene, οὗ πλέων λόγος ἢ τῶν ἄλλων, seems to me to mean, as Burnet says, "who is of more account than the rest," in spite of Adam's curt remark that it "does not" mean this. How Adam got his own interpretation, "who had more of the universal and eternal Logos in him than the others," out of the words is more than I can conceive.

The fourth essay, on the "Hymn of Cleanthes," deals charmingly with Stoic thought on the universal Fatherhood of God, and offers several interesting suggestions in answer to the question why Christianity rather than Stoicism became the religion of the Roman Empire. I should be inclined, I think, to lay less stress than Dr. Adam does on the lack of a sufficient hope of immortality in Stoicism, and perhaps even on the great advantage possessed by Christianity in being able to assert that its ideal of the divine man who has won the Olympian victory over evil was an accomplished fact. The main defect of Stoicism, I take it, was one which Adam deals with as merely one among its other weaknesses; owing to its "immanence" doctrine, it could not really admit of the "grace of God"; it could enforce the doctrine of human sinfulness, and dwell eloquently on the way in which we have all come short of the Kingdom of God, but it left the convicted sinner alone in the world to work out his own salvation in his own—admittedly non-existent—strength.

Essay V., on "Ancient Views of Suffering and Evil," is an intensely interesting survey of Greek thought on the problem (finally solved, according to Boswell, by Dr. Johnson) πόθεν τὰ κακά. I note that it contains the one serious error in principle about Plato which I find in the volume. Dr. Adam follows mistakenly in the steps of Zeller when he makes the Plato of the *Laws* into a Manichee, and credits him with believing in an "evil world-soul" or kind of "devil" co-ordinate with God. What Plato does really say in the famous passage under discussion (*Laws*, 896 D-E), is not that there are two souls of the world, *the* good and *the* bad one, but that there must be *at least* two, the good soul and at least one bad one. He leaves it open to us to suppose that there may be as many

bad and disorderly souls as we please to account for the evil in the world. Thus there is no hint whatever of the *co-ordination* of a good and an evil principle. Plato is, I take it, thinking of the Orphic belief in fallen δαίμονες. These would not even necessarily be "devils" in the plural; any lapse from goodness in them would be sufficient to account for their doing mischief. Nor need we suppose them to be hopelessly beyond reclamation. Why a soul should "fall," I admit, Plato does not explain, any more than *our* official theology can explain *why* some of the angels fell; all that he needs is that there should be *now* "evil spirits" to account for the plain fact that creation is not now in all its parts very good. The suggestion of a supreme evil deity co-eval with the good deity is read into his text by the editors, but it is not there for all that.

Finally the book ends with a brilliant defence of classical study as a moral as well as an intellectual training, which should stop the mouth of any belated reviler of "dead" literatures. The two main points are most admirably chosen. The great intellectual value of classical study is that it widens our intellectual sympathies by teaching us to see life through the eyes of men who were so like ourselves in many of their judgments on it, and yet so unlike in others. The very shock of surprise which we feel at the mingled likeness and unlikeness is the wholesome wonder which is the parent of wisdom. And morally classical education is priceless because (this is a Platonic thought which was always a favourite with Adam) we grow like what we contemplate. As we make ourselves at home with the Greeks, we grow into the Greek love of knowledge and of inner measure, order, and self-control; as we learn to see life as the Romans saw it, we acquire in our own souls the Roman's sense of civic duty and reverence for law.

A. E. Taylor.

Justice and Happiness. By W. Benett. Oxford: at the Clarendon Press, 1911. Pp. 140.

Within a very small compass, Mr. Benett discusses in a highly generalised fashion the concept of Justice in its relation to Happiness. He wishes to ascertain why Justice is valued, for, as he holds, its relation to Happiness is indirect. And he replies that it is because Justice is the condition of Freedom and not because it produces Happiness.

There are two chief theories of Happiness, universalistic and egoistic Hedonism, both of which imply mistaken views of Freedom. In the former it is Communism, which presupposes numerical equality among persons; in the latter Private ownership is made possible by personal inequality. Mr. Benett is ready to acknowledge the ethical and religious value of the principle of Personal Equality, and also the stimulus to enterprise and achievement in a principle which regards persons unequal in endowment and fortune. But neither is to be identified with Justice because the conditions of true Freedom are wanting. Personal Equality is manifestly based on a mechanical view of character and conduct, while the principle of inequality, unless further qualified, entertains a theory of unconditional Freedom which is not less disastrous to Justice. It must be, then, that Justice is a compromise between these methods which are really its two constituent elements. When either of these, dispersion or accumulation of property, is unduly developed, stagnation, despotism and degeneration ensue. And Justice is what can never be in excess.

What has been said concerns only one of the two main forms of Justice, the Distributive. Retributive Justice occasions no problem,

because the two principles of Equality and Inequality are congruous, as in a school, where it is recognised by the scholars that all should be treated on an equal level but also that each be rewarded strictly according to desert.

Finally, Mr. Benett holds that the conditions of true Freedom are supplied by "forward evolution," and mistrusts theories, whether as Ethics in the form of Eudaimonism or as Biology in the form of Eugenics, which are unwarranted anticipations of Nature. We do not know if all men are equal nor do we know how far they are unequal; we should not profess to determine the end of Life but trust to the guidance of the Cosmic Spirit.

Animal Intelligence: Experimental Studies. By E. L. Thorndike. New York, The Macmillan Co., 1911. Pp. viii, 297.

In this volume—the third in the Animal Behaviour Series, edited by Prof. R. M. Yerkes—Prof. Thorndike brings together his experimental studies of comparative psychology: "Animal Intelligence" (1898), "The Instinctive Reactions of Young Chicks" (1899), "A Note on the Psychology of Fishes" (1899), and "The Mental Life of the Monkeys" (1901). A theoretical paper on "The Evolution of the Human Intellect" (1901), which was a direct outgrowth of this experimental work, concludes the book. Two new essays are added: an introduction, on the Study of Consciousness and the Study of Behaviour, and a chapter entitled "Laws and Hypotheses for Behaviour". The introduction contains a polemic against introspection, and a plea that psychologists henceforth devote themselves rather to behaviour than to consciousness: "there can be no moral warrant for studying man's nature unless the study will enable us to control his acts".

P. E. Winter.

The Value and Dignity of Human Life. By Charles Gray Shaw, Ph.D., Professor of Philosophy, New York University. Boston: at the Gorham Press, 1911. Pp. 399.

It is refreshing to find that America, the home of Pragmatism among other novelties, is showing a conservative attitude. Here is another book which is decidedly anti-pragmatic. Its watchword is Humanism, but it is not the decapitated Humanism of Mr. Schiller. In Mr. Shaw's view, the head-piece is essential to conduct, cognition being more distinctive of human personality than conation. We should say that Des Cartes was well advised when he wrote *cogito* and not *sentio* or *facio*, for neither of these latter terms would quite justify an immediate inference to existence. We have been reminded that Humanism has a history which goes back as far as Protagoras, but it is not equally creditable. The pretentious self-consciousness of eighteenth-century Rationalism was not the full-blooded Humanism of the Renaissance but the second childhood of the human spirit. The vapid and ineffective character of modern Humanism is only partially concealed by the unlovely and anomalous extravagance of senile decay affecting the manners of boisterous youth. Mr. Shaw seeks to show that there is a higher form of Humanism which we must cultivate if man is to fulfil his true destiny.

As a student of Eucken, he holds up the culture of spiritual life as the most catholic realisation of Humanity. Besides Humanism, he recognises only two other methods, Hedonism and Intuitionism. Of these, the

former sinks man in Nature while the latter abruptly tears him away. Self-assertion and self-renunciation equally fail to justify conduct as reasonable. Sense-affection gives too little, Conscience asks too much. Both may be factors in the progress of Humanity but neither is to be regarded as a permanent norm. It is peculiar to Humanity that it has its essential being in the transition from Nature to Spirit, and it is therefore wrong to assume, with Hedonism, that Man is a piece of Nature, or, with Intuitionism, that he belongs to a Spiritual world which is antagonistic to Nature. The hedonistic method results in the paradox that pleasure never pleases, the rigor of a clear conscience engenders despair. Even in men like Schiller, Kant and Schopenhauer, who also recognised the humanity of man in their æsthetical theories, moralism predominates. In consequence of this, the final good in life is found in a violent denial of the will-to-live or at its best in the resignation of Wagner's Parsifal and the renunciation of Ibsen. Mr. Shaw appreciates the greatness of such men, for in the extreme intensity of their negation they magnify the dignity of human life. But I am not sure if the major morality he commends is not less precious than this heroic Paganism. It is true, as he recognises, that Christianity is more than sacrifice and that "no amount of altruism can atone for want of spiritual insight and purpose" (p. 365). But Christianity has always a place for renunciation, however extreme, and the whole-hearted trust in a Providence whose will we do not know such as this Humanism promises, is not essential to the heroism of faith. To expect that we must always recognise the value of our conduct in order to be good, however disinterested and noble this evolution may be, is a premature anticipation of Heaven upon Earth.

Two minor points in criticism may be noted. It sounds a little odd to say that Green abandoned Reason in his ethical theory. Is it correct to say that moralism predominates in Schiller? It is the case in *Die Künstler*, but this was written before the *Critique of Judgment* appeared; while in *Ideal und das Leben*, the Ideal is completely realised in the æsthetical life alone. As for the Æsthetical Letters, it is enough that Goethe admired them while he did not agree with *Anmuth und Würde* because the moralistic view obtruded.

An Introduction to Experimental Psychology. By CHARLES S. MYERS, M.D., Sc.D. Cambridge University Press, 1911. Pp. vi, 156.

This book is one of the series of shilling "Manuals of Science and Literature" now being issued by the Cambridge University Press. It aims at giving to the "educated reader a general scope of the science and of the experimental methods it employs". As was to be expected from the author's name, the aim is admirably fulfilled. The "general reader" will find the book full of interest. And those among them (and they are not a few) who still have a hazy notion that Experimental Psychology is chiefly concerned with some form of spirit-rapping or table-turning, will find enlightenment in an agreeable form. Even the metaphysician who is still sceptical about the possibility of applying experimental methods to mental processes, may not be ill-advised to peruse this little book. The treatment of such topics as Memory and Æsthetics will show that Experimental Psychology is not confined by any means to the physiology of the sense organs.

Dr. Myers has been especially happy in resisting the temptation to give a cursory survey of the whole field of Experimental Psychology. He has instead selected several topics and dealt with them with remarkable thoroughness, considering the space at his disposal. The student

of general psychology who is still a novice in experimental work, will find an admirable survey of important recent work, especially in the chapters upon Touch, Colour Vision, Memory, and the Müller-Lyer illusion. The educationist will find congenial reading in the chapters on Memory and Mental Tests, though he must expect less exactness of method and results in the latter comparatively new department. For an illustration of the way in which exact quantitative methods can be applied to psychological questions the reader should turn especially to the chapter on the Müller-Lyer illusion.

The interest of the book is enhanced by frequent allusions to the mental characteristics of primitive races. It is unfortunate perhaps that the hardest chapter in the book is placed first, but the "general reader" who finds that even Dr. Myers' lucid style does not make clear to him the mystery of 'protopathic' and 'epicritic' sensibility, can proceed at once to later chapters without the comprehensibility of these being affected by the omission.

The book concludes with a useful bibliography, but in this the chapters have become somewhat disarranged. The references given under Chapter IV. are obviously intended to refer to Chapter V., and *vice versa*.

C. W. Valentine.

VIme Congrès International de Psychologie (Geneva, 2nd-7th August, 1909): Rapports et Comptes Rendus. Published by Ed. Claparède. Geneva: Libraire Kündig, 1910. Pp. 877. Price 20 francs. [Continued from the October number.]

(2) *Paul Sollier.* "Le Sentiment cénesthésique" (pp. 197-211). [The essential characteristic of cœnæsthesia is the personal feeling which is linked to organic sensation. This feeling is not a sensation or a group of these, but is a synthesis of present and past perceptions.] D.—*Benj. Bourdon.* "La Perception de la Position de notre Corps et de nos Membres par Rapport à la Verticale" (pp. 227-246). [Argument and experiment to show that: "Si nous considérons le corps tout entier et si nous le supposons droit, les inclinaisons qu'il subira seront perçues en première ligne par les sensations cutanées de pression qui se produiront aux endroits où le corps sera soutenu, par example sous les pieds si le sujet se tient debout librement sur une base qu'on incline". "Dans le cas d'un membre, nous pouvons être renseignés sur sa position de la même manière, c'est à dire par des sensations de pression, de distension de la peau, d'effort." "L'hypothèse d'un 'sens statique' dont l'organe siégerait dans l'oreille et qui nous fournirait, entre autres renseignements, directement la perception de la position de notre tête par rapport à la verticale, et indirectement la connaissance de la position de notre corps tout entier, ne s'appuie sur aucun argument décisif."] E.—*Sydney Alrutz.* "Une Méthode d'investigation des Phénomènes psycho-physiologiques" (pp. 247-262). [Experiments with a form of planchette supported on a knife-edge to show that if certain persons of a labile nervous disposition place their fingers on the short, nearer, part of the instrument and make an extreme effort of will, they can thereby increase the weight of the other end of the plank by as much as 100 grams. All possible precautions are guaranteed by the author.] F.—*M. A. Thauziès.* "L'orientation lointaine" (pp. 263-276). [Tries to show that the power of orientation of homing pigeons depends on a magnetic sense, because they never turn to the west; keep close to the ground following the contours, and are much disturbed by electric and magnetic disturbances.] G.—Les Tropismes.

(1) *Jacques Loeb.* "Die Bedeutung der Tropismes für die Psychologie" (pp. 281-306). [A statement of his view that the facts of psychology can be submitted to the analysis of physical chemistry. Orientation is automatically regulated by the law of mass effects and by the generally symmetrical build of animals.] (2) *H. S. Jennings.* "Tropisms" (pp. 307-324). ["The tropism is not a uniform phenomenon; the various reactions classified under the concept show diversities in practically every possible category. It is not clear that orientation is really the essential point in the tropism." "The symmetrical position is an incident of the reaction, not its essence."] (3) *Georges Bohn.* "Les tropismes" (pp. 325-337). [Follows Loeb and points out against Jennings that "La sensibilité différentielle est la grande cause perturbatrice des tropismes".] The lengthy discussion (pp. 338-358) of these papers turned on vague general questions (which seem to be excited by utterances of the principals) of the relation between body and soul, between psychological and mechanistic sciences. M. Claparède's words (pp. 345-348) meet the case completely. H.—Classification psycho-pédagogique des arriérés scolaires. (1) *O. Decroly.* "Classification des enfants irréguliers et en particulier des irréguliers scolaires" (pp. 359-393). (2) *Theodor Heller.* "Zur Classification des infantilen Schwachsinns" (pp. 394-398). (3) *G. C. Ferrari.* "Les arriérés scolaires" (pp. 399-402). (4) *M. G. Persigout.* "Du critérium d'une classification d'anormaux" (pp. 403-410). (5) [xxxvi] *M. C. Schuyten.* "Sur la classification intellectuelle des écoliers normaux" (pp. 779-786). J.—*J. Ioteyko.* "Introduction à la Méthodologie de la Psychologie pédagogique" (pp. 423-455). Third Part. A.—Terminologie. (1) *Ed. Claparède.* "L'unification et la Fixation de la Terminologie psychologique" (pp. 467-479). (2) *J. Mark Baldwin.* "General Rules of Terminology and Recommendations" (pp. 480 f.) (3) *R. de Saussure.* "Unuformigo de la Scienca terminaro" (in Esperanto) (pp. 482-487). B.—*Jules Courtier.* "Emploi d'un système de symboles et designes en psychologie" (pp. 500-527). C.—*Otto Lipmann.* "Die Wertung der Resultate von Aussage-experimenten" (pp. 528-534). D.—(1) *W. Nagel.* "Ueber Aichung der Farbenreihe und die Herstellung von Musterfarben" (pp. 535-539). (2) *Th. Valette.* "Note sur une classification générale des Couleurs" (pp. 539-541). (3) *Léon Asher.* "Ueber Farbenaichung" (pp. 542-545). (4) *A. Thiéry.* "Sur la possibilité et l'utilité d'une classification internationale des couleurs par trois coordonnées réellement indépendantes et distinctes" (pp. 545-550). E.—*Vilfredo Pareto.* (1) "Nouvelle méthode d'interpolation pour les phénomènes donnés par l'expérience" (pp. 552-539). (2) *V. Furlan.* "Sur les applications d'une nouvelle méthode d'interpolation" (pp. 559-563). (3) *Charles Henry.* "L'interpolation et l'énergétique psycho-biologique" (pp. 564-570). Communications Individuelles (pp. 591-821).

H. J. W.

Technique de Psychologie Expérimentale. Par le Dr. Ed. Toulouse et H. Piéron. Paris: Doin et fils, 1911. 2 vols. Vol. i., pp. 303; vol. ii., pp. 288. Price 10 francs.

It is six years since the first edition of this work was published. The second edition is in two volumes and is enlarged to about double the size of the first. It bears the names of but two of the original collaborators, Dr. Vaschide having been removed by death. Virtually, in its present form, this is a new work. The points of historical and theoretical interest discussed in the former edition have for the most

part been omitted; the chapters, for example, headed "End and Theory" and "Classification of Psychic Processes" have disappeared. On the other hand, far more space is devoted to an elaborate and detailed description of apparatus, especially in connexion with the psychology of sensation. Chapters have been added dealing with the measurement of certainty in evidence, of suggestibility, of comprehension, of reasoning, of the speed of carrying out an instruction or of inhibiting an action already begun. There is also a new chapter on statistical methods, the calculation of the mean, the mean variation, the probable error, and the correlation coefficient.

In this country such a book is of more value to the advanced than to the elementary student of the subject. He will find pieces of apparatus described and illustrated (*e.g.* Polack's photoptometer; Michotte's tachistoscope, Toulouse and Piéron's reflexometer) which are almost or quite unknown in our own laboratories. But he will find no mention of the psycho-physical methods, upon a mastery and appreciation of which we believe successful experiment in psychology so materially to depend. Nor will he realise the enormous importance of introspection in experimental psychology. The book will rather leave him under the impression that numerical data, not obtained by any precise method,—merely numerical data,—constitute the goal of the subject. He will be led to believe that the meaning of individual differences in these numerical data may be ascertained not by a study of the introspective records of the subjects, but by the fancied interpretations of the experimenter. The student will thus go far astray.

ANONYMOUS.

Prolegomena zur Naturphilosophie. Von HERMANN GRAF KEYSERLING. München, 1910. J. F. Lehmann's Verlag. Pp. xi, 159.

In the six lectures which form the content of this remarkably fresh and fascinating volume, the writer develops a theory of knowledge based on the Kantian, along the lines of Bergson's theory of Life. His initial postulate is the reality of all phenomena. In view of this the function of critical philosophy is limited to determining the place within phenomenal reality occupied by the process of knowing. The *a priori* principles to which phenomena are subordinate (if the distinction is worth keeping up) are grounded on the knowing subject, not, however, as the unknown ego of apperception, but as the phenomenon man, for whom, as appearance, a place must be found in the whole system of appearances. All priority, especially of a constitutive nature, is thus denied to thought, which becomes merely a given phenomenon; and, as the author says, "Kein Gegebenes ist als solches denknotwendig" (p. 33). We can test the laws of thought, therefore, only in one way—*viz.*, experimentally [the writer identifies the term "experimentell" with the Kantian "traszendental"], and hence, from the cosmic standpoint, the cogency of a logical law is neither more nor less than that of a physical experiment. It is on this very ground that the author bases the correspondence of thought with things. We reach valid or empirically real results not by the capricious application of thought, but by the use of logically permissible generalisations . . . "so folgt [hieraus] mit absoluter Notwendigkeit, dass die Grundnormen des logisch-mathematischen Denkens für alle Naturvorgänge gültig sind" (pp. 42-43).

The interpretation given to the universal validity thus established furnishes the solution to the problem of knowledge, and raises the whole question of law in its acutest form. In the first place, a methodological

analysis results in the discovery that scientific knowledge does not lead *to*, but *away from*, the given, and that scientific theories are neither true nor false, but are merely instruments of our knowledge, and, as such, either well or ill adapted to their ends. Hence the idea of scientific truth presupposes the idea of "a knowing or would-be-knowing spirit". "Der Erkenntnistrieb ist also nicht durch die Wissenschaft, sondern umgekehrt die Wissenschaft durch den Erkenntnistrieb zu definieren" (p. 58). But neither can this "impulse to know" be taken as a final presupposition; for it implies a need, which is only a determination of one who needs. We are thus in the last resort confronted with "das Dasein eines lebendigen Menschen," and the conclusion is that "die Erkenntniskritik ist wirklich Biologie" (p. 76).

In the last lecture but one is developed the writer's view as to Life. Although the law-creating thought is admitted to be itself subject to law and the forms of life or Lebenserscheinungen are on the same level as other natural events, Life itself is neither appearance nor law. It is "the sole transcendent reality"—"neither being nor becoming, force nor matter, variety nor unity, neither a function nor a limit, a differential nor an integral" (pp. 118-119). It is something in me which "selber unfassbar, alle Fassbarkeiten bedingt" (p. 119). The principle of Life is thus substituted for the transcendental principles of the Kantian philosophy, which in their turn are reduced to an empirical level.

The value of this transcendental determination of the Life-principle is again critical. On the one hand, it limits the sphere of knowledge as defined by law, at once authenticating and restricting the claims of the latter. Science has to do with only two orders of the real—given appearances, and their laws or relations. Appearances as given we have seen to be assumed from the outset as real. In what sense can the same be said of relations, which are not given, but which are revealed in scientific theory—the instrument of Life? The answer is: there are no laws apart from thought; but as soon as thought supervenes, law becomes unconditionally valid, because nature has the peculiarity of so expressing itself in spirit. In a word, laws are just the mode in which nature appears to thought; only this must be understood in an objective, not in a subjective sense: "der Verstand schreibt der Natur eben nicht seine, sondern i h r e Gesetze vor" (p. 97). On the other hand, the theory before us opens the door to Metaphysics—conceived not as a reasoned system of scientific knowledge, or indeed as capable of reasoned statement, and so communicable, but as a direct and mystical "expression of Life," analogous in its immediacy to bodily beauty, art and religious feeling.

One word of criticism must be offered on the presentation of this singularly subtle and attractive theory of knowledge. The writer undoubtedly strains the unity of his view with that of Kant. It is true that where he substitutes Life for other transcendental principles, beneath the transposition there appear in analogies the familiar features of the Critical Philosophy. There is a corresponding demarcation, *e.g.*, against Psychologism, against Dogmatism (in the form of Idealistic metaphysics), and against the radical empiricism of Mach and Avenarius. But the writer greatly underestimates the extent of the divergence from Kant which his change in the principles of knowledge brings with it. He does not hesitate to ally with Kant's own position his assertion: "Der Satz: meine Welt ist Vorstellung, durch die Erkenntnisformen gestaltet und bedingt, bedeutet also eine besondere Fassung der allgemeinen Wahrheit, dass die Welt jedes Organismus sein Milieu ist, dessen spezifischer Charakter seinerseits von der spezifischen Organisation des fraglichen Lebewesens abhängt, und aus diesem Grunde nicht das Ansichsein der

Dinge, sondern deren Inbetrachtkommen für dem Organismus zum Ausdruck bringt" (p. 64). Surely the *physiological* interpretation of the *limitations* of knowledge is quite as foreign not only to the letter, but to the spirit of Kant's view as is the physiological interpretation of knowledge itself.

ARCHIBALD A. BOWMAN.

Philosophische Bibliothek, Bd. 67 : *Kirchner's Wörterbuch der Philosophischen Grundbegriffe.* 6 Auflage. Dritte Neubearbeitung. Ed. von Dr. CARL MICHAËLIS. Leipzig : Verlag von Felix Meiner, 1911. Pp. viii, 1124.

One of the outstanding characteristics of recent advance in philosophical inquiry has been the great development in what may be called subphilosophical studies and the cross fertilisation of philosophy from these. The movement towards cosmopolitanism has been scarcely less conspicuous. In regard to lines of approach other than his own to the secret of philosophy none need nowadays feel shame in avowing that he needs a guide-book or directory. He is not necessarily a layman in philosophy who is puzzled with a phrase in which *mutation* means something other than change, or is troubled what to make of an allusive utterance about *entropy* or *heterogony*. Any one but a native-born Teuton may be glad to have a gloss on so recurrent a word as *Einfühlung*, while of purely technical words, *akatalepsia*, *holomerianist*, and what not, we all remain innocent so long as with decency we may. Such is the justification for a wordbook of a class of which Kirchner's is from its moderate price and workmanlike character a favourable specimen, and the explanation of the necessity under which it is to expand in size and come more and more in contact with the more modern things. Time was when it was best known for the guidance it afforded to the terminology of Kant and the attention it devoted to the technique of formal logic. Under the editing of Dr. Michaëlis it has more than doubled in size, the increase being for the most part in the domain of psychological and biological terminology, and it may now be said to do for Wundt specially, and writers whose interest takes a kindred direction, what earlier editions did so adequately for Kant.

Next in importance, perhaps, to the two sets of articles noted, with which on the whole the book stands or falls, come certain sections, belonging to the older plan, on philosophico- or theologico-ethical subjects. If these sometimes surprise by a quaint collocation such as 'Origen and Schelling on the other hand hold,' and sometimes disappoint by lacunæ, as *e.g.* in an item on Predeterminism where Schelling is not referred to, they are generally suggestive and adequate. Who could be ungrateful for a luminous note on symbolic anthropomorphism, or for a reminder of the origin of the word dualism in theological controversy?

It is on two points that the editor and his coadjutors are most open to criticism. They attempt to give the purchaser more than his money's worth, with the result that on Political Economy, for instance, there should either be nothing or very much more, while the article on Anthropology is a curious farrago and none of the specific topics belonging to that science, totemism *e.g.*, and magic, can be said to be treated adequately. And their conception of what is required in the matter of bringing up to date the articles where the subject-matter is static and matter of history, but where knowledge is nevertheless in rapid movement, seems to us unsound. Many of the sections on the older philosophy seem to need looking to. 'Plato attached to the universal a separate

existence.' 'Plato and Leibniz conceive reality as a pluralism,' and so forth. The formula by which Herbart and Eleaticism are conjoined seems misleading in the same way. The section on Averroism is surely all but worthless. To write two and a half lines on Predicables and refer only to Kant is odd. And δίχα does not mean *zweimal*.

Of defects in bringing up to date, the omission of the terminology of Avenarius seems important. Croce has not reached his niche under the heading 'Æsthetics,' though *Ben Crote* (*sic !*) is referred to on page 280. In the article on dreams it is disappointing to have Freud's less important book alone referred to, and his name misspelt beyond recognition. Pragmatism has less than a page given to it, though there is an item on Tuism. In bibliography there is a tendency to appear up to date by the insertion of recent books of relatively no account, with the exclusion of older books of importance. Harth's *Philebus of Plato, e.g.*, is surely of less importance for Plato than many books not on Dr. Michaëlis' list. It is because the *Wörterbuch* is of a serviceable type and contains much that is useful that it is desirable to offer such criticisms.

HERBERT W. BLUNT.

Bericht über den IV. Kongress für experimentelle Psychologie in Innsbruck. Edited by Prof. Dr. F. SCHUMANN. Leipzig: J. A. Barth, 1911. Pp. xxviii, 312. Price M. 11.

This volume contains four excellent Sammelreferate: (1) "Aufbau und Lokalisation der Bewegungen beim Menschen," by C. v. Monakow (pp. 1-28); (2) "Ueber das Wesen und die Bedeutung der Einfühlung," by M. Geiger (pp. 29-73), with a bibliography of 161 titles; (3) "Die Funktionen des Vestibularapparates," by Gustav Alexander (pp. 74-94), with a bibliography of fifty-five titles; (4) "Die Ergebnisse der experimentellen Psychopathologie des Gedächtnisses," by Paul Ranschburg (pp. 95-180), with a bibliography of 177 titles. Ranschburg's paper summarises a great deal of work that has not been condensed hitherto, while the paper by Geiger states and arranges all the theories bearing on the empathetic attitude in a most useful manner. All these papers may be heartily recommended to the notice of those interested in the respective subjects.

Of the smaller reports of Vorträge mention may be made of two: "Bemerkungen zur Frage nach der Vererbung erworbener psychischer Eigenschaften," by Sigmund Exner (pp. 203-208); and "Ueber die Bedeutung ethnologischer Untersuchungen für die Psychologie und Aesthetik der Tonkunst," by C. Stumpf and E. v. Hornbostel (pp. 256-269), in which four transcriptions of primitive melodies are given. At the end of the volume there are twenty-eight pages of descriptions and illustrations from the exhibition of apparatus held at the congress (text by Dr. H. Rupp). It may be of interest to students of music to know that a metallophon with the Javanese and Siamese scale, constructed by Prof. C. Stumpf, can be had for 60 marks from Berlin (v., p. 306 and illustration).

H. J. W.

Der Wissensbegriff. Von JULIUS BAUMANN. Heidelberg, 1908.

This is one of a series of 'historical monographs on philosophical concepts,' and gives in the short space of two hundred and thirty pages a summary account of the doctrines of philosophers concerning the nature

of knowledge from Thales to the present day. It would probably be difficult for any one to treat so complicated a subject in so compressed a form very satisfactorily ; and a reviewer would find his task of criticism easier if he were already acquainted with the general position of the author. From a quotation on page 226 from a work of his own one gathers that in Prof. Baumann's judgment knowledge consists in the attainment from 'indubitable presentations' (*Vorstellungen*) of certainty of the 'that' of things and of our souls, and partly also of certainty of their 'what' and their proximate conditions, while the true 'how' of their being and activity remains for ever hidden from us. Naturally he surveys the teaching of philosophers in the past from the point of view thus indicated. He is always ready to insist on the 'individuality' of the various doctrines, which will commonly be found to reflect the characteristic personality of their originators. Great importance is attached to climate as a dominant factor in determining the tendency of national thought. Interesting are the remarks on the resemblance of modern doctrines of 'mind-cure' to a certain aspect of Stoicism (p. 96), on the anticipation by Confucius of Kant's postulate-theology (p. 116), on the development from Gassendi to Hume considered as the working out of a reply to 'occasionalism' (p. 166), on the influence of Montaigne upon Kant (p. 187). Kant is no favourite master of Prof. Baumann's ; who prefers, as there is no agreement as to the true meaning of his own words, to take Schultz as an authoritative exponent of them. Prof. Baumann seems to underrate the importance of the quantitative to Aristotle (p. 82) ; and the only works on scholastic philosophy which he commends to his readers are the unsatisfactory ones of M. Le Wulf. The interesting chapter on Arabian philosophy suggests to an outsider that this has been a subject to which Prof. Baumann has devoted especial attention. We have noticed a few misprints ; Holosh for Holcot (p. 163 n.) ; Origines for Origenes (p. 197) ; and (unless we mistake) Le Rou for Le Roz (p. 219).

C. C. J. Webb.

Verità e Realtà. Di Alessandro Bonucci. (Biblioteca di filosofia e pedagogia.) Modena : A. F. Formiggini, 1911. Pp. 518. L.7.50.

The comprehensiveness of the title of this work is not belied by its contents. Sig. Bonucci as an Absolutist has no fear of the reproach of system-making, and he here attempts to give a more or less complete exposition of the system in which he believes. His book is one of very considerable interest, not so much for anything novel in the way of philosophical doctrine it contains, as for the point of view from which it is written, and for the endeavour which the writer makes to bring his metaphysics into touch with life. For Sig. Bonucci is full of the conviction that man's chief end is transmutation into the Absolute, and he has written his book to aid the wayfaring man on his journey towards that goal.

Neither in the base nor in the apex of his metaphysics does our author appear to improve greatly on his predecessors. To the establishment of the fundamental principle of all Idealism—the identity of existence and knowledge—he contributes nothing new, but contents himself with the ancient story, that because you can't know a thing unless you know it, it can't exist unless it is known. In his exposition of what he means by 'the Absolute' he finds himself in serious difficulties. In order to give us a dim notion of its nature—and it is a very dim notion that we get—he has to sin flagrantly against consistency. For after insisting that

only negative judgments are possible about the Absolute, he at once goes on to define it as a kind of experience. It is true he thinks to defend himself from the charge of inconsistency by saying that the term experience is an improper one, and that the definition is no more than "a formula which lets us . . . dimly understand, in the only way possible to us, where the tendency that is all one with us is moving," one that "gives us the only knowledge of the Absolute that is possible for creatures of relativity like ourselves". But surely the only effect of this qualification is to alter the judgment from 'the Absolute is experience' to the unqualifiable and still positive judgment, 'the Absolute in some measure resembles experience'.

Having examined the goal, Sig. Bonucci proceeds to examine in the last part of the book (pp. 249-515) the various paths which lead to this goal, and the various obstacles which impede progress along them. These paths are four in number—*la via estetica, la via morale, la via religiosa, la via scientifica.* What, in effect, we find here is a treatise on ethics and the philosophy of religion. Man's end, according to Sig. Bonucci, is to become one with the Absolute: this end, as is natural, is to be attained by casting off the works of relativity. We are not surprised then that Sig. Bonucci's morals are of an ascetic type, and that he is no great friend of the body. In his attitude to religion he is —perhaps inevitably—rather patronising, and the comparison which he draws between the aspirations of the religious man after saintliness and the philosopher's "proud attempt to be God" might almost give offence to a saint who had no sense of humour.

Sig. Bonucci's style presents constant difficulties to the British reader. Grotesque is probably the epithet which most of those who remember their struggles with *Exploratio Philosophica* will feel inclined to apply to it. Inordinately long sentences abound—the first sentence in the book contains 68 words, the second 142—and the system of punctuation employed is very different from that usual in English books.

W. L. Lorimer.

Opera hactenus inedita Rogeri Baconi. Fasciculus I. Metaphysica Fratris Rogeri Ordinis Fratrum Minorum de Viciis Contractis in Studii Theologie. Fragmenta quae supersunt nunc primum edidit Robert Steele. Oxonii, e Typographeo Clarendoniano.

Fasciculus II. liber Primus Communium Naturalium Fratris Rogeri Partes Prima et Secunda, edidit Robert Steele. Oxonii, e Typographeo Clarendoniano.

Fasciculus III. liber Primus Communium Naturalium Fratris Rogeri Partes Tertia et Quarta, edidit Robert Steele. Oxonii, e Typographeo Clarendoniano.

Fratris Rogeri Bacon Compendium Studii Theologiae, edidit H. Rashdall una cum Appendice de operibus Rogeri Bacon edita per A. E. Little. Aberdoniae: Typis Academicis, MCMXI. (vol. No. iii. of the privately issued Publications of the British Society of Franciscan Studies).

The foregoing works will all be welcomed by two classes of students; those who take a keen interest in scholastic philosophy, and are aware how unintelligible the history of modern philosophy is, when it is studied as something new which sprang suddenly to life about the year 1600, or at any rate had its roots entirely in the thought of classical antiquity, and those who are more particularly interested in recovering

the real features of a great Englishman who has, inevitably, been much more talked about than studied. Is it too much to hope that some of the loving care which these publications evince may yet be bestowed not only in making other writings of Bacon accessible (how much there is to be done in this respect may be learned from a perusal of Mr. Little's list of works still extant in manuscript), but also in providing a readable text of those two great later luminaries of the Franciscan Order and the University of Oxford, Scotus and Ockham? The task is, no doubt, a laborious one, but we owe it to the memory of Oxford's great men to do something in reparation for the villainies perpetrated on the Oxford libraries by Thomas Cromwell and his gang.

It is clear that one chief difficulty, perhaps the chief difficulty, of Mr. Steele and Canon Rashdall has lain in deciphering the almost infinitely numerous contractions in the writing they have been called on to expand, and, though it is perhaps an impertinence in a reviewer who knows nothing by personal experience of such work, I cannot but feel that Mr. Steele's sureness of hand increases very much as we pass from the fragments of the *Metaphysica* to the *Communia Naturalia*. Take, *e.g.*, the following sentence from page 5 of the former: *Omnium enim naturam pollicetur que (i.e. quae) paria Deo sentire est.* I can make nothing of this ungrammatical and—in the context—irrelevant phrase, nor can Mr. Steele either, to judge from his note. For once he gives us the unexpanded MS. text, thus: *omniū enī* n̄n̄ *pollr* [*? pollr'*] *q̄paria deo sentire est* —I would modestly suggest that what this means is *omnium enim notitiam polliceri*[1] *comparia Deo sentire est*, an echo of the suggestion of Aristotle that if "divinity could be jealous," we might expect that it would keep σοφία as its own special prerogative. So I find various cases where the editor's division of the words seems to me clearly not what the author meant, and probably not what the scribe wrote. An amusing case occurs on page 35, where Seneca is quoted as saying of "luxury" that *cor ipsum excoquit in vicium malum voluptati dissonantem.* For *in vitium* in the passage (*Quaest. Nat.*, IV. 13) modern editors read *invictum*, which suggests at once that Bacon merely erred by dividing words wrongly. He probably read *in victum malum* (sc. εἰς κακὴν δίαιταν), and it would be worth while to examine Mr. Steele's MS. again to see whether *it* also does not read *victum.* Of course it must be borne in mind that Mr. Steele does not profess to be editing the MS. critically, but printing it as it stands. Yet when I compare the freedom of his text of the *Communia Naturalia* from gross and obvious errors, such as *talis* for *talia*, *destruimur* for *destruitur*, and the like, which abound in the *Metaphysica*, I cannot help wondering whether *all* the difference is due to better handwriting on the part of a scribe. In the *Communia* I only note certain errors of punctuation which any intelligent reader can correct for himself, and one or two cases in which the contraction Sōrtes (*i.e.* Socrates, as the "stock" example of a logical subject) is left without expansion. In Dr. Rashdall's work, I have not, I think, discovered anything that looks wrong except a place on p. 50, l. 15, where there is a fairly obvious *dittographia* of a clause of four words.

What may be known or conjectured about the place which the works edited by Mr. Steele were intended to hold in Bacon's system will be best learned from his own introductory notes. The *Communia Naturalia* we know was intended to find its home in the Third Part of the great *Scriptum Principale*, which Bacon's troubles with his Superior and with

[1] Or (since Mr. Steele says that the *l*'s of *pollr* are due to a later hand) *? profiteri.*

the Pope prevented him from completing, and Mr. Steele shows that there is reason to think that the Metaphysic on the faults contracted in the study of Theology was meant to form part of the Second Division of the same work. The *C.N.*, it should be noted, quote, and are thus, as a whole, later than the *Opus Majus*. The so-called "Compendium of Theology," which in its extant portion deals mainly with questions of a logical kind, and more specially with the "import of propositions," gives its own date, 1292, and is thus the latest of its author's many writings. I would specially commend to the reader as of peculiar interest in the *Metaphysica* the full presentment of the very curious argument by which Bacon attempts to prove from astrology that a lawgiver whose law was finally to supersede all others, *must* have been born of a Virgin just at the traditional date of the birth of Our Lord, in the *C.N.*, the long and interesting discussion on the principle of individuation, which ends with a definite pronouncement in favour of the view that matter universal, matter generic, matter specific, matter individual, all have their corresponding "form," and that no created thing is devoid of "matter". Here we have, no doubt, a conscious polemic against the views of St. Thomas, that angels are pure "forms," and that there is in man only one "form," the *anima rationalis*. On Bacon's view there must be in each of us a whole hierarchy of forms, the forms of "elementary matter," of that specific *compositum* which we call our "body," of our individual "vegetative," "animal," and "rational" souls. We have clearly here, as Dr. Rashdall says in speaking of the problem about angels, the germs of the Scotist *haecceitas*. Yet, as he also notes, Bacon's reaction against Conceptualism often takes him to the opposite extreme. Often enough he insists in the fashion of the thorough-going Platonic realism on the *universale* as having matter and form of its own, and then in the next breath tells us that the universal is *only* what is present alike in several individuals. Thus his vacillation between Realism and Nominalism may remind us of the similar contradictions in John Stuart Mill. In the account of the signification of names in the *Compendium Theologiae* we see exactly what a consistent Nominalism ought to lead to. Bacon will not allow that "Socrates alive" and "Socrates dead" can both be equally Socrates. The name was given to denote a certain living human being, and when he ceases to live the ground of the denomination as "Socrates" or even as "a man" is abolished. (This is, of course, merely what Mill ought to have said, to be logical, when he tried to identify classes with collections of actually existing things. The standard of logical accuracy being lower in his day, he smuggles into his class "man," all men who have actually lived or will actually live, and supposes this aggregate to be what is referred to when we make a statement about "all men," as if *e.g.* the statement "Mt. Blanc is a biped" were purely insignificant.) But for a full examination of the very direct bearing of scholastic discussion on our logical problems of to-day I must refer the reader to Dr. Rashdall's own *Introduction*.

A. E. Taylor.

Received also :—

James Ward, *The Realm of Ends, or Pluralism and Theism* (Gifford Lectures, St. Andrews), Cambridge, University Press, 1911, pp. xv, 490.

D. S. Margoliouth, *The Poetics of Aristotle*, translated from Greek into English and from Arabic into Latin with a revised Text, Introduction, Commentary, Glossary and Onomasticon, London, New York, Toronto, Hodder and Stoughton, 1911, pp. xix, 336.

William James, *Memories and Studies*, London, New York, etc., Longmans, 1911, pp. 411.

Herbert Richards, *Platonica*, London, Grant Richards, Ltd., 1911, pp. viii, 356.

John Elof Boodin, *Truth and Reality, An Introduction to the Theory of Knowledge*, New York, Macmillan, 1911, pp. viii, 334.

Stanley M. Bligh, *The Desire for Qualities*, London, etc., Henry Frowde, 1911, pp. xii, 322.

Charles Arthur Mercier, *Conduct and its Disorders*, London, Macmillan & Co., Ltd., 1911, pp. xxiii, 377.

Archives of Neurology and Psychiatry from the Pathological Laboratory of the London County Asylums, Claybury, Essex, Frederick Walker Mott, vol. v., 1911. Printed for the London County Council, pp. v, 226 + 38 + 26 + 28 + 40 + 74 + 10.

John MacGunn, *Liverpool Addresses on Ethics of Social Work*, Liverpool, The University Press; London, Constable & Co., Ltd., 1911, pp. 195.

Eugenio Rignano, *Inheritance of Acquired Characters, a Hypothesis of Heredity, Development, and Assimilation.* Authorised Translation by Basil C. H. Harvey, with an Appendix upon the Mnemonic Origin and Nature of the Affective or Natural Tendencies, Chicago, The Open Court Publishing Co., 1911, pp. 413.

G. F. Barbour, *A Philosophical Study of Christian Ethics*, Edinburgh & London, Blackwood, 1911, pp. xii, 440.

Nicholas Murray Butler, *Philosophy*, New York, The Columbia University Press, 1911, pp. vi, 51.

I. Gregory Smith, *Practical Psychology*, London, Bennett & Co., The Century Press, 1911, pp. 93.

William Porcher Du Bose, *The Reason of Life*, London, New York, Bombay, and Calcutta, Longmans, Green & Co. 1911, pp. 274.

David Irvine, *The Metaphysical Rudiments of Liberalism*, London, Watts & Co., 1911, pp. lxvii, 288.

Rev. Edward Bruce Kirk, *Evolution, Life, and Religion, A Study*, Glasgow, John Smith & Son, Ltd.; London, James Clarke & Co., 1911, pp. xv, 321.

Adolphus Alfred Jack, *Poetry and Prose, being Essays on Modern English Poetry*, London, Constable & Co., Ltd., 1911, pp. viii, 278.

"Zivola," *The Story of My Reincarnation*, London, The Century Press, 1911, pp. xi, 335.

David Irvine, *Wagner's Bad Luck, An Exposure of 800 errors in the Authorised Translation of Wagner's Autobiography*, London, Watts & Co., 1911, pp. 116.

J. Arthur Thomson, *Introduction to Science*, London, Williams & Norgate; New York, Henry Holt & Co.; Canada, Toronto, Wm. Briggs; India, R. & T. Washbourne, Ltd., pp. v, 256.

W. F. Barrett, *Psychical Research*, London, Williams & Norgate; New York, Henry Holt & Co.; Canada, Toronto, Wm. Briggs; India, R. & T. Washbourne, Ltd., 1911, pp. viii, 255.

Henri Bergson, *Laughter; An Essay on the Meaning of the Comic*, Authorised Translation by Cloudesley Brereton and Fred Rothwell, London, Macmillan, 1911, pp. vi, 200.

Cesare Lombroso, *Criminal Man*, briefly summarised by Gina Lombroso Ferrero with an Introduction by Cesare Lombroso, illustrated, New York and London, G. P. Putnam's Sons, 1911, pp. xx, 322.

Henri Berr, *La Synthèse en Histoire : Essai Critique et Théorique*, Paris, Alcan, 1911, pp. xvi, 271.

Drs. Ley and Menzerath, *L'Étude Expérimentale de l'Association des Idées dans les Maladies Mentales*, Gand, A. Van der Haeghen, 1911, pp. 199.

Gilbert Chinard, *L'Exotisme Américain dans la Littérature Française au xvi Siècle d'après Rabelais, etc.*, Paris, Hachette, 1911, pp. xvii, 246.

Dr. Alfred Kühtmann, *Zur Geschichte des Terminismus*, Leipzig, Quelle & Meyer, 1911, pp. viii, 127.

Georg Simmel, *Philosophische Kultur, Gesammelte Essais*, Leipzig, Werner Klinkhardt, 1911, pp. l, 317.

Ernst Cassirer, *Das Erkenntnisproblem in der Philosophie und Wissenschaft der Neueren Zeit*, 5te Band, Zweite Durchgesehene Auflage, Berlin, Bruno Cassirer, 1911, pp. xv, 832.

Dr. Fausto Squillace, *Die Soziologischen Theorien*, Deutsch von Dr. Rudolf Eisler, Leipzig, Werner Klinkhardt, 1911, pp. 352.

Edward John Hamilton, *Perzeptionalismus und Modalismus eine Erkenntnistheorie*, übersetzt von Martin Klose, Oberlehrer in Grünberg in Schl., Leipzig, Werner Klinkhardt, 1911, pp. lv, 115.

Dr. H. Vogt und Dr. R. Bing, *Ergebnisse der Neurologie und Psychiatrie*, Erster Band, Erstes und zweites Heft, mit 38 Abbildungen, Jena, Gustav Fischer, 1911, pp. li, 452.

Hermann Schneider, *Jesus als Philosoph*, Leipzig, J. E. Heinrich, 1911, pp. 48.

Rudolf Eucken, *Können wir noch Christen sein?* Leipzig, Veit & Co., 1911, pp. v, 236.

IX.—PHILOSOPHICAL PERIODICALS.

Philosophical Review. Vol. xx., No. 3. **J. B. Baillie.** 'The Moral and Legal Aspects of Labour.' [Labour may be defined as the physical activity of man's body directed upon such physical objects of nature as can be manipulated for man's economic purposes in society. It is neither mere hardship nor mere subordination; it is, on the contrary, man's moral life in one of the forms in which the moral life is lived; it is as much morality as paying debts or telling the truth. Legally, it has rights of property and of contract, determined simply by reference to the well-being of the community, and the share of the individual workman in the common good. It is never an end in itself, as man as a whole is; hence all conceptions of a labour-State must be one-sided.] **B. H. Bode.** 'Realistic Conceptions of Consciousness.' [To interpret consciousness as awareness (McGilvary, Moore, Hobhouse) is to postulate sense-data which give us 'absolute' fact; such a realism is involved in the difficulties raised by the relativity of sense-perception, and is compelled tacitly to substitute a different object, to which it has no legitimate title. To interpret consciousness as a context in which experiences occur (Fullerton) avoids the difficulties of sense-relativity, but otherwise has no advantage over the former theory. To interpret it as meaning (Woodbridge) is to start from the point of achieved adjustment, and so to fail in appreciation of the function which meanings fulfil. To define it in terms of those constructs whereby the psychologist accomplishes the end which he has in view (Dewey) may or may not, as our perspective widens, prove satisfactory: meantime, this definition allows us to evaluate the realistic movement. It may stand as a protest against subjectivism and transcendentalism; it can hardly establish itself as a rival doctrine, since it perpetuates the same fundamental fallacy.] **W. H. Sheldon.** 'Ideals of Philosophic Thought.' [There are two ideals which dominate men's thought: that reality be subject to certain logical rules, and that it is the here-and-now verifiable. Neither can be demonstrated; yet the one or the other must be adopted by every philosopher. Hence in the great problems (rationalism and empiricism, realism and idealism) we find a dead-lock on which argument has no effect: so, *e.g.*, in the present discussion of the nature of relations as external or internal. The only way out would be to show that the ideals, clearly conceived, do not conflict.] **E. Jordan.** 'The Unknowable of Herbert Spencer.' [In the psychological phase of Spencer's argument, the Unknowable as an ontological reality is assured existence by what is found in consciousness. But this residuum is an unqualified datum, raw material of thought accepted without explanation of how it loses its rawness. It is no more an experience than a leaf is a tree; and if not an experience, it has no place in philosophical discussion. The logical phase of the argument seeks to establish the Unknowable as a condition of knowledge, through analysis of the structure of knowledge.

Negatively, the doctrine of relativity of knowledge appears as an attempt to sift out the unknowable from the knowable by a process of abstract analysis: which is absurd. Positively, Spencer holds that thinking is relationing; but he misses the corollary, that knowledge is intelligible only by its interconnectedness.] Reviews of Books. Notices of New Books. Summaries of Articles. Notes.

Psychological Review. Vol. xviii., No. 1. **F. L. Wells.** 'Some Properties of the Free Association Time.' [Discussion based on some 12,000 observations. (1) *Sex.* The women cover a much wider range, and the central tendency of their times is longer. They fall about equally into two distinct species, the one of which is slightly more constant, the other markedly less so, than the men. (2) *Form of response.* The women give twice as many judgment reactions, and considerably fewer cases of subordination and superordination. The shorter times of the men are expressed in prompter response by superordination, contrast, co-existence, identity, and perhaps by the more superficial predicates. There is a negative relationship between number of contrasts and number of superordinates; the individual with the longer time favours superordination. All the lower forms of association were relatively infrequent. The probable error of an absolutely free time is rarely more than 5 per cent. of the time itself. (3) *Emotion.* Emotive colouring means, on the whole, a longer time; but other factors are of equal lengthening power: this generalisation holds for observers with and without introspective practice. The time of the individual observation is an unreliable index of degree of emotion. Emotion is, in fact, only one form of obstruction; suppression, distraction, indecision, and the like must all be taken into account, compared and weighed.] **E. Jacobson.** 'Experiments on the Inhibition of Sensations.' [The following is a typical procedure: a weight is chosen to give the standard sensation of pressure, and two other weights are so taken that the standard is judged heavier in, say, 30 per cent. and 80 per cent. of the respective judgments of comparison. Now the lighter weights are given in connexion with a loud sound. If, in both instances, the percentage of cases in which the standard is judged heavier is increased, we have to do, not with a mere confusion of judgment, but with an inhibition of the pressure-sensations from the lighter weights by the sounds. The results show that moderately strong sounds are thus inhibited by strong simultaneous pressures, and moderately strong pressures by simultaneous sounds or other pressures. Moreover, increased attention to the inhibitor increases its effect; increased attention to the other sensation reduces the inhibition. Distraction of attention thus consists in the inhibitory influence of sensation upon sensation; and degree of (subjective) intensity of sensation is a function of degree of attention.] **H. Woodrow.** 'The Rôle of Pitch in Rhythm.' [Work by a strictly quantitative method shows that pitch, intensity and duration cannot function vicariously in the production of the perception of rhythm. Intensity has a group-beginning, duration a group-ending effect. Pitch-differences produce practically no rhythm, and the insignificant amounts that are produced show no general tendency whatever; they are, then, probably due simply to variation in the measurements of a quantity whose true value is zero.] Editorial. **J. R. Angell.** 'William James.'

British Journal of Psychology. Vol. iv., Part i. **Carveth Read.** 'Instinct, Especially in Solitary Wasps.' [General nature of Instinct discussed: possibly referable to tropisms, but even these not entirely

predictable; no hard and fast line between Instinct and compound reflexes. "Impulsive" and "Chain" instincts distinguished. In reference to solitary wasps there is shown, (1) great variability of instincts even among individuals of the same species; (2) the fallibility of their instincts at every stage; (3) memory of definite objects and localities not explicable by mere "sense of direction". There follows an exposition of how complex chain-instincts may develop from simpler actions, assuming principles of natural selection. Preparation of nest for the young traced to making of nest for parents' own use, which in its turn developed from mere modification of natural crannies. The barrenness of females a possible source of sociability in wasps, the "impulse to work" being satisfied in helping others. Concentration upon one kind of food leads to the skill of the specialist and so is advantageous—it may even be accompanied by an anatomical adaptation. Physiological economy may explain cases where prey is only paralysed, not killed. As to intelligence of wasps: (1) memory of locality is remarkable, though possibly flight guided partially by direction of light; (2) sense of quantity shown in size of nest and quantity of food, and in proportioning latter to former; (3) evidence for adaptation of means to end critically discussed.] **A. Winifred Tucker.** 'Observations on the Colour Vision of School Children.' [Object—to compare the colour vision of English children with that of primitive peoples. Children from five to ten years of age (*a*) tested with Holmgren's wools; (*b*) asked to name colours; (*c*) tested for thresholds with Lovibond's tintometer. (*a*) Children of all ages tend to confuse blue and violet; matches with green very varied; red most easily matched. (*b*) Discrimination may be faulty even in cases where name is correctly applied to saturated colour. There was a tendency "to put together all wools to which the same name was given," as among primitive people; thus blue-greens and green-blues generally called by predominating colour and blue-greens often matched by pure greens. (*c*) Decrease in thresholds for red, yellow and blue as children get older. No marked difference between boys and girls. Increase of threshold for young children no greater for blue than for red or yellow. Children with dark and light eyes show no appreciable difference in threshold for blue. Indirect vision for blue not as good as direct, as is case with primitive people. Similarity of mistakes made with Holmgren's wools by children and natives ascribed to psychological rather than physiological reasons. No correlation between colour sensitivity and general intelligence.] **Knight Dunlop.** 'The Fall-hammer, Chronoscope and Chronograph.' [Criticism of Wundt's Fall-hammer and of Zimmerman's, and suggested changes. In latter, large variation found when timing fall from break to make; "floating lever" too heavy. Reliability of break-spark in chronograph records. Latency of magnetic markers shown by spark method. Many results of work in past with unsuitable markers must be unreliable. In Hipp chronoscope advisable not to reverse current: otherwise occasional forgetting to reverse commutators leads to appreciable error. Magnets should have coarser wire and fewer turns to reduce reluctance and shorten latent periods.] **T. H. Pear.** 'The Experimental Examination of Some Differences between the Major and Minor Chord.' [Külpe's suggestion that fusion of chord "varies with position of its constituent degrees of fusion within the tonal scale; decreasing when the worse degrees are the lower" and *vice versa*, is put to experimental test and justified, especially in case of most musical observers. A scale of fusion—grades in intervals established for each observer. Average order (of four observers) Octave, Fifth, Fourth, Minor Third, Minor Sixth, Sixth, Third, Major Seventh, Minor Second, Natural Seventh, Major Second. Method demonstrated of calculating consistency of judgments in method of Pair-Comparisons.

Tendency for fusion of chords to be greater when interval having greater frequency-ratio occupies lower position within the chord, and *vice versa*: shown by both musical and "unmusical" subjects. Same true for frequency-difference; this last not attributable to relative proportion of beats. "Indirect" relationship of clangs in a chord conduces to fusion more than "direct" relationship does, especially with more musical observers (and major chord possesses higher degree of "indirect" clang relationship than the minor chord formed from it); hence confirms Meyer's statement that fusion of Dreiklang is higher, the simpler the ratio of its frequencies, "whether the chord be considered as a whole or the tones be taken in pairs". All results apply both to musical and "unmusical" major and minor chords.] **T. H. Pear.** 'The Classification of Observers as Musical and Unmusical.' [Tests used: analysis of intervals, difference-limen for pitch, singing test, criticism of tests as criteria for classification into musical and unmusical. Description of observers in previous research as regards their general attitude to music, auditory imagery, etc. Reasons for not accepting tests as adequate criteria for determining whether an observer is musical or not.] **W. H. Winch.** 'Some Relations between Substance Memory and Productive Imagination in School Children.' [Experiments in four schools. Class of boys tested in substance memory (short stories) and imagination (inventing of short stories), and divided into equal groups on basis of imagination tests. One group then practised in substance memory; this group showed greater improvement in later imagination tests than other groups not so practised. This effect shown in best, medium and weakest boys (as judged by the tests). Class of girls similarly divided into two groups: one practised in memory until no further improvement shown — "fatigue-point": this group showed *deterioration* in later imaginative work, though group unpractised in memory showed improvement in imaginative work, confirming view that overtraining of memory can have prejudicial results in imaginative work. "Fatigue" effects appear to be temporary, but evidence shown that improvement due to practise remains, at least for some weeks. In both schools, marked positive correlations obtained between memory and imagination. Lower coefficients of correlation in other schools with younger and less proficient children.]

Note.—The notices of "The 'Perceptive Problem' in the Aesthetic Appreciation of Simple Colour-Combinations" by E. Bullough; "Experiments on Mental Association in Children" by R. R. Rusk; and "The Transfer of Memory in School-Children" by W. H. Winch, which appeared as reviews of new books in the previous number of MIND, were analyses of the articles comprising vol. iii., part iv., of the "British Journal of Psychology."

ARCHIVES DE PSYCHOLOGIE. Tome x., No. 4. **E. Cramaussel.** 'Le sommeil d'un petit enfant.' [At the end of the second week, the curve of breathing is very irregular; physiological functions, like mental, require practice. On the forty-fifth day the curve is markedly more regular, but the respiratory mechanism does not even yet function with entire smoothness. At the end of the third month, the curve is regular. Meanwhile, the sleeping child's response to stimulation has grown increasingly selective; it is possible, then, that we have in such responses a key to the processes of the infant consciousness.] **A. van Gennep.** 'Dessins d'enfant et dessin préhistorique.' [Tests of a five-year-old girl show that drawing from the object (lamp, window, table) is relatively easy, whereas the copying of a linear figure, A or H or M, is immensely difficult. Hence the realism of prehistoric cave-drawings is a sign of rudimentary, not of

achieved technique. There is a tendency to the continuation of rhythmical movement; arrest of movement with abrupt change of direction is difficult; the child's drawings show signs of creative activity.] **M. Foucault.** 'Étude expérimentale sur l'association de resemblance.' [Review of Peters' work (*Z. f. Ps.*, 1910); report of experiments with two-place numbers and nonsense-syllables. Similarity (partial identity) has associative value only when it is perceived as such by the observer. But this means that it has, in its own right, no associative value; it cannot be compared with contiguity. Similarity derives its efficacy from a judgment, an intellectual act; and in this regard it does not stand alone; the opposition of contrast or incompatibility, the relation of cause and effect or of means to end, will serve the same purpose. On the other hand, repetition is not the sole source of associative connexion; we must add the perseverative tendency of Müller, perhaps a tendency to give meaning to a nonsense-syllable, etc.] **E. Claparède.** 'La question de la "mémoire" affective.' [Review of the status of the controversy; psychological analysis of memory (impression, retention, association, temporal localisation, revival, recognition, disharmony with the present self). The only assured form of affective memory is recognition; the representation of an affective state is not proved, nor even its reproduction (since the elements reproduced are probably organic sensations, and not affections).] **J. Degand.** 'Observations sur un enfant sourd.' [A deaf-mute boy acquires the word and meaning *to-morrow* at seven, *yesterday* five months later, *to-day* still a year later. He comes to a knowledge of his infirmity, when nearly eight, by noting that his teacher replies to a question without looking up. The paper contains further observations, on the development of the idea of time, and on that of language.] Bibliographie. Notes diverses.

Revue de Philosophie. 1er Mars, 1911. **J. B. Sauze.** 'The School of Würtzburg and the Method of Experimental Introspection.' [Külpe and Marbe, Professors of Experimental Psychology at Würtzburg. Not mere physiologists. Discovery of "conscious thought, without image, without word, without expression".] **A. Gemelli.** 'The Notion of Species and Evolutionist Theories.' [Mendel and Vries. "Species is a reality, a true biological unity; it may be determined experimentally; it is constituted by individuals descended from one single individual, and having characteristics perfectly distinct, constant and invariable during a long series of generations."] **G. Jeanjean.** 'Critical Review of Pedagogy.' [An up-to-date bibliography.] **P. Le Guichaoua.** 'Responsibility and Sanction.' [Without free will, no real responsibility.] **A. Farges.** 'The Count Domet de Vorges, His Philosophical Work.'—1er Juillet, 1911. **P. Duhem.** 'Time According to the Greek Philosophers.' [According to Archytas, time is 'the number of motion, or the interval proper to the nature of the Universe,' that is to say, the time between two events is the number of revolutions of the Universe accomplished between those two events. Aristotle accepts the definition, 'the number of motion,' and for the motion which is the supreme determinant of time he takes the revolution of the outer crystal sphere containing the fixed stars; which means to us the rotation of the earth on its axis. Strabo objects that time cannot be a number, number being discontinuous, while time is continuous: he makes time 'the quantity contained in actions'.] **J. Toulemonde.** 'The Nervous Temperament.' [Obstinate, yet capricious; prone to excessive care of health and time.] **Dr. R. Van der Elst.** 'The Facts of Lourdes.' ['Ill-observed, the facts of Lourdes may be confounded with morbid or natural phenomena; but,

well observed, they assume a considerable philosophical importance.'] **E. Bruneteau.** 'The Natural Law.' [Even under the strange immoral customs of savages one may generally discern principles of sound morality at work, though misapplied.]—1er Août, 1911. **X. Moisant.** 'The Individualism of Carlyle.' [Summed up under these three propositions: '(1) Society is neither the sole nor the principal object of our duties'; '(2) Social authority is not sovereign'; '(3) Social Providence is not the sole true Providence'.] **P. Duhem.** 'Time According to the Greek Philosophers.' [Neo-Platonist theories of time. The theory of Damascius and Simplicius.] **M. Gossard.** 'Concerning Certain Imperfections of Human Knowledge.' [How our intelligence needs to be eked out by imagination; and, consequently, how little we really grasp by such concepts as 'immateriality,' 'intelligence,' 'substance'.] **M. Serol.** 'The Inclinations.' [Human inclinations afford an obvious verification of the Aristotelian theory of act and potency.]

Zeitschrift für Psychologie. Bd. lvii., Heft 5 und 6. **T. Wagner und C. L. Vaughan.** 'Bibliographie der deutschen und ausländischen Literatur des Jahres 1909, über Psychologie, ihre Hilfswissenschaften und Grenzgebiete.' [3132 titles, as against 3067 of the *Psychological Index*, and 4547 of the corresponding list for 1908. The scheme of classification, though slightly more elaborate in places, is practically unchanged.]—Bd lviii., Heft 1 und 2. **A. Gelb.** 'Theoretisches über "Gestaltqualitäten".' [Detailed criticism of the doctrine of 'form of combination,' as it appears in Ehrenfels, Meinong, etc. The question hinges upon the nature of the conscious relations which obtain between the separate qualities of a perceptive whole. These relations, in the writer's view, are given, precisely as the absolute contents themselves are given; they are perceived, precisely as colours and tones are perceived. The 'form' of a complex, upon this basis, appears simply as a peculiar mode and sum of relations; it has no special phenomenal content. There remains the problem of the forming activity of consciousness; but that is another matter.] **W. Koehler.** 'Akustische Untersuchungen.—II.' [(1) Criticism of Hermann's theory of formants; report of experiments, in which the harmonic overtones of vowel-sounds were suppressed, under varying conditions, by interference. Helmholtz' theory of these sounds must be judged correct; there is no evidence of the Hermann formant, and there is evidence against it. (2) The series of tonal qualities is not a straight line, as has been commonly supposed, but a number of connected lines; the tonal system is therefore like the colour system, except that the lines do not return upon themselves. Experiments with forks and variators show that at about 130 vs. the semi-vowel *m* is heard; above this point, the tone takes on a *u*-character, till at the octave (260) the *u* sounds full and pure; then the *o*-character begins, and the *o* is pure at the next octave; then follow, in order, *a*, *e*, *i*; and after the *i* come, apparently, *s* and the anterior *ch* (as in *lächeln*): what is heard below the *m* has not been determined. The experiments are reported in full, and the writer notes various scientific anticipations and external confirmations of his discovery.] Besprechung. [Hillebrand on Titchener, *Feeling and Attention*.] Literaturbericht.

Archiv f. d. gesamte Psychologie. Bd. xviii., Heft 2. **C. Ernst.** 'Tierpsychologische Beobachtungen und Experimente.' [Begins with a well-considered critical warning against the admission of anecdotal material into comparative psychology. Then details experimental studies of the path-finding powers of the red ant (*F. rufa*). Much in the

behaviour of ants that looks like intelligence is mechanically acquired and may be mechanically explained; there is, however, evidence of learning; and there is evidence of guidance by sight. The work was undertaken in order to try the issue between Wasmann and Bethe, and the writer apparently finds truth on both sides; while he emphasises mechanism, he speaks also of memory-image and act of recognition. He makes, however, no attempt at an ant psychology.] **T. J. de Boer.** 'Ueber umkehrbare Zeichnungen.' [In order to test the Wundtian theory of fixation and eye-movement, a number of perspective figures was briefly exposed, and the observer was requested in every case to indicate the point, line or surface that was seen as nearer or farther than the rest of the figure. With simple and non-associative figures there is often a fixation of some central point or part; but the subsequent perception of depth is probably due, not to the fixation, but to a habitual mode of the production of ideas; and, as the figures are given a closer resemblance to actual objects, the influence of associative factors may be plainly traced. There are individual differences.] **A. Huther.** 'Ueber das Problem einer psychologischen und pädagogischen Theorie der intellektuellen Begabung.' [Beginning with a critical discussion of Wundt's doctrine of talent, the writer reaches the conclusion that an analytical description of mental endowment must always start out from the concrete case, a determinate circle of professional ideas and a particular talent dependent upon these ideas and exemplified in them. He takes up the case of mathematical, especially of geometrical ability, and attempts a classification of qualitative types. What is inherited is not ability, but only certain formal factors, functions, which may be utilised in training; here the author differs from Möbius. There can be no formal training of intellect or feeling, but only of will.] **O. Rutz.** 'Neue Ausdrucksmittel des Seelischen.' [The lecturer's father, J. Rutz, discovered that certain singers, of good training and of adequate vocal range, found it difficult to render certain compositions. The cause lies in the fact that singing and the reading of poetry demand, unconsciously on the part of composer and poet, a peculiar colouring of the voice. Three great types may be distinguished: the Italian, dull and soft voice; the French, bright and hard; and the German, bright and soft; the combination dull and hard has not been found. The difference of vocal colouring depends upon bodily attitude, 'resonance of the trunk'; rules of posture are laid down, and subtypes distinguished, with illustrations from well-known sources; and the writer remarks that most singers lean naturally toward a particular type, and cannot transcend it. An Appendix gives the favourable judgment upon the discovery of Sievers, Wundt, and others; the various types and sub-types may be verified by laryngograph and pneumograph.] **R. Mueller-Freienfels.** 'Affekte und Triebe im künstlerischen Geniessen.' [Emotions may be classed as emotions of mood and emotions of impulse. In the enjoyment of art, the observer may experience the emotions of actor (*Mitspieler*) or of spectator, though the extreme types are rare; and, as actor, may be stirred sympathetically (*Mitaffekt*) or personally (*Eigenaffekt*). It is, then, absurd to suppose that æsthetic enjoyment is 'disinterested' in the sense that it is always emotion of mood; emotion of impulse may be æsthetic, though it is in that case modified and limited, since all motor functions are inhibited by the æsthetic predisposition. The point thus made is clinched by a brief survey of emotions which do, in fact, find application in the domain of art.] Literaturbericht. Einzelbesprechungen. [Meumann on Volkmann, *Grenzen der Kunste, auch eine Stillehre*, and Waetzold, *Die Kunst des Porträts*.] Referate.—Bd. xviii., Heft 3 und 4. **F. Kiesow.** 'Beobachtungen über die Reaktionszeiten der schmerzhaften Stichemp-

findung, nebst einigen Vorbemerkungen über die Entwicklung unserer Kenntnis von den Schmerzempfindungen seit J. Müller und E. H. Weber.' [Reviews the psychological status of pain from the time of Johannes Müller to the present day ; concludes that pain is a specific sensation, whose end-organ is independent of that of touch. Reports reaction-experiments (natural, sensory, muscular, indifferent) with stimulation of pain-spots upon forearm and lower lip. The times are unexpectedly short ; thus, the sensory and muscular times for the forearm average 215σ and 140σ respectively.] **G. Moskiewicz.** 'Zur Psychologie des Denkens ; erste Abhandlung.' [Seeks to trace, analytically, the process of reflective thought, and to discover the principles on which ideas connect with one another when their connexion results in meaning. The motive to thought is the refusal of the associative mechanism to meet a demand ; the end of thought is a tendency, brought to consciousness by this inhibition, for a train of ideas to take a definite direction, in order to arrive at a definite connexion. The writer starts out from the notions of 'constellation' and of 'superior ideas'. The constellation is brought into relation with the 'problem' and the 'determining tendency' of other authors ; its essential feature is the arousal of an idea by a multiplicity of reproductive tendencies ; it lies within the limits of an associationist psychology. The chief characteristic of an ordered course of thought is that an idea (or complex of ideas) is held fast by the attention, so that it can develop its own 'constellating' activity and can inhibit the constellating effect of other ideas. Ideas that satisfy one and the same 'problem' or 'point of view' unite to form general ideas, Liepmann's 'superior ideas,' which may appear in consciousness as explicit contents, or in a merely potential or schematic way. Armed with these concepts, the writer takes up, first, the topic of simple inference (*e.g.*, the argument from a phenomenon to its cause) ; the regular procedure is that a superior idea unfolds in particular ideas, until some of these enter the relation demanded by the problem ; the process begins with synthesis, and passes through analysis to a new synthesis ; the progress of thought depends, however, essentially, upon the interplay of the purely associative mechanism. He then turns to the thought that 'puts things together' (diagnosis of a disease ; Sherlock Holmes) and asks how the particular ideas give rise to a superior idea, and how the particular ideas themselves appear in consciousness. The superior idea is again a matter of constellation ; in the progress of thought, processes of inference are started by the unfolding of this idea. But the superior idea works with constellating effect upon all the ideas that are connected with the original particular ideas, and is thus either confirmed or invalidated ; in the latter case the whole process is repeated, until reflexion has attained its end.] **F. M. Urban.** 'Ein Beitrag zur Kenntnis der psychometrischen Funktionen in Gebiete der Schallempfindungen.' [Uses Keller's results in illustration of the writer's view of the psychometric functions.] **O. Schauer.** 'Ueber das Wesen der Komik.' [Maintains, on the basis of critical discussion and of instances, that all cases of the comic involve a sort of teasing (*Neckerei*). Polemic against Freud's work.] Literaturbericht. **M. Kelchner.** 'Sammelbericht über den gegenwärtigen Stand der Erörterung einiger Grundprobleme der Gefühlspsychologie.' Einzelbesprechungen. [Kemp on Stumpf, *Beobachtungen über Kombinationstöne ;* Wentscher on Ach, *Ueber den Willensakt und das Temperament ;* Rieffert on Jaensch, *Zur Analyse der Gesichtswahrnehmungen.*] Referate. —Bd. xix., Heft 3 und 4. **O. Lipp.** 'Ueber die Unterschiedsempfindlichkeit im Schfelde unter dem Einflusse der Aufmerksamkeit.' [Repetition with some modification of procedure, of Wirth's work, published in *Psychol. Studien*, ii. ; Wirth had been his own sole observer. Wirth's

main conclusion, that the differences of clearness in the field of vision are relatively small, is confirmed. If the region under observation extends to the periphery (whole field, half, quadrant), it is found that the preference of attention is towards the periphery; if the region is central, the preference is towards the centre. The smaller and the more naturally situated a field of observation, the more easily is it commanded. These results are qualitative only; their quantitative expression, in terms of the absolute values of the limens, is still impossible. Distribution of attention is not analogous to diffusion of light; *i.e.*, we do not now apprehend, all together and dimly, a number of objects which with concentration we should apprehend separately and clearly; distribution of attention implies a shift of mental attitude, with a corresponding change of object.] **T. Conrad.** 'Sprachphilosophische Untersuchungen: erster Teil.' [An inquiry into the properties and functions of words, considered as the intelligible units of speech. (1) The author begins by distinguishing two groups of object-words or denominative words: names, and not-names. The names are either individual or singular (John) or common or general (Smith); and the not-names show the same class-division (sun, God; table, chair). The relation of the singular name to its object is the specific relation of being-so-called; the general name bears the same relation to a given and determinate group of objects (members of the family of Smiths). The various modes of this relation are worked out; and it is shown that, in principle, the same classification holds for the not-names. (2) All these words are, as units of a vocabulary, denominative, in the sense that they are marks or labels of objects. When they become units of discourse, they may be denominative in a more pregnant way; they assume the function of designation or representation. Thus, in the phrase 'John was there,' there is designation of an individual, besides the intrinsic denomination carried by the name-word; and the word 'John,' in the phrase 'John is his name,' is not only intrinsically denominative, but also represents an absolute name-word 'John,' which, as such, is not in the phrase. (3) As used in discourse, the general denominatives which are not-names may, further, characterise (*kennzeichnen* as opposed to *bezeichnen*). This function gives us the relation which the words, as units, bear to their objects: they do not name a given and determinate group, but denominate an indeterminate group that is constituted by objective likeness of character or quality; they are thus finally differentiated from the corresponding class of general names. When the function is discharged in discourse, in the phrase, it may appear in either of two principal forms: as direct or as indirect characterisation. A further paper is to deal with the modes of indirect characterisation, and especially with tropes.] **F. Schwiete.** 'Ueber die psychische Repräsentation der Begriffe.' [A study of thought which sets out, not from the judgment, but from the concept, and seeks to determine the mode of representation in consciousness of the meaning of words. Five sets of experiments were made, with varying instruction: free associations, constrained associations, apprehension of meaning with and without a time-limit, reaction to tachistoscopic exposures. (1) The first apprehension of a concept consists in the moment of familiarity, and the consciousness that its exact meaning can be drawn from the subconsciousness. Familiarity is carried by an image of the word itself, or a nascent visual idea, or an obscure logical connexion, or a general group of related ideas, or a feeling. (2) Explicit meaning is carried, individually, by imaginal contents, or by inclusion of the term in some logical connexion or some group of related ideas, or by a procedure of definition, or by some or all of these processes in combination. The processes themselves are described in detail.] **J. Geyser.** 'Einige Bemerkungen

zu dem Aufsatz von Georg Moskiewicz "Zur Psychologie des Denkens".' [The psychology of thought requires, first of all, an exact analysis of the cognition of relation; and this analysis cannot be carried out without exact, and if possible experimental, introspection.] **A. Thierfelder.** 'Eine Sinnestäuschung.' [A turning wheel alters its apparent direction of rotation, in accordance with Wundt's rule, according as the nearer or farther edge is fixated.] IV. internat. Kongress für Philosophie in Bologna, März-April, 1911. Literaturbericht. **E. Zschimmer.** 'Berichtigung.' **O. Braun.** 'Entgegnung.' [Apropos of a review of Zschimmer's *Welterlebnis*, i.]

Zeitschrift für Philosophie und Philosophische Kritik. Bd. cxlii., Heft 1. **Otto Kröger.** 'Die Realität der Aussenwelt im Lichte des absoluten Idealismus.' **Hermann Hegenwald.** 'Über das Wesen und den Begriff des Geisteslebens in Rudolf Euckens Lebensphilosophie.' **August Messer.** 'Der Erkenntniss theoretische Idealismus in seinem Verhältnis zum Empirismus und Realismus.' **Arnold Ruge.** 'Der vierte internationale Kongress für Philosophie zu Bologna (6 bis, 11 April, 1911).' Rezensionen, etc.—Bd. cxlii., Heft 2. **H. Aschkenasy.** 'Grundlinien zu einer Phänomenologie der Mystik' Rezensionen, etc.—Bd. cxliii., Heft 1. **Alfred Wenzel.** 'Ein neues Spinozabuch.' **Herman Hegenwald.** 'Weltbegriff und Weltanschauung in der Philosophie Johannes Rehmkes.' **Otto Braun.** 'Das Ringen um eine Weltanschauung.' Rezensionen, etc.—Bd. cxliii., Heft 2. **Leo Ssalagoff.** 'Vom Begriff des Geltens in der modernen Logik.' **Kristian B. R. Aars.** 'Die intellektuelle Anschauung im System Platons.' Notizen, etc.

Rivista di Filosofia. Anno iii., Fasc. 2, April, 1911. [This number is entirely occupied by papers read before the International Congress of Philosophy, held at Bologna in the spring of this year.] **B. Varisco.** 'Sul concetto di verità.' [Truth of fact or contingent truth implies the existence of necessary truth, which again must have its seat either as an indeterminate reality dispersed among a number of human consciousnesses, or as a realised determinate whole in a single extra-human subject. The second or Theistic solution seems far the more eligible to Prof. Varisco.] **Alessandro Levi.** 'Ordine giuridico e ordine pubblico.' [A rather bewildering paper, the upshot of which seems to be that where there is a conflict the guarantees of private liberty should give way to the guarantees of public order, and the claims of international law to the claims of territorial sovereignty.] **Roberto Assagioli.** 'Il subcosciente.' [The writer considers that the existence of what he prefers to call 'conconscious' mental states has been scientifically established, and proposes that these should be more systematically studied with a view to their habitual utilisation for educational and reformatory purposes.] **Luigi Valli.** 'La valutazione.' [What we call values are not qualities or properties inherent in certain objects or actions, but feelings of attraction or repulsion generated in ourselves by their contemplation. Only to constitute real values these feelings must not be merely momentary or personal. They must be comparatively permanent and universal. And in the case of ethical values what makes a motive truly moral is that it should act with the cumulative force of such a permanent and universal attraction or repulsion.] **Carlo Formichi.** 'È il Buddhismo una religione o una filosofia?' [Buddhism, being an ethical system of atheistic pessimism, is not in our sense of the word a religion, and this is no less true of the Northern than of the Southern or Singhalese version of its

creed.] **Alessandro Chiapelli.** 'Il pluralismo moderno e il monismo. [The recent revival of pluralism in philosophy forms part of the general reaction against rationalism exhibited in other forms by pragmatism, voluntarism, and the intuitionism of Bergson. But pluralism, to begin with, is the negation of the principle of continuity so strongly affirmed in Bergson's philosophy ; and to end with it is the negation of all philosophy by making explanation itself impossible. For explanation means the reduction of the many to the one.] **Guiseppe Tarozzi.** 'Il contenuto morale della libertà nel nostro tempo.' [The idea of liberty in contemporary thought is recovering the meaning of a positive and progressive energy which it represented in the teaching of Rousseau, Mazzini, and others in the pre-constitutional period. It is no longer identified with the mere removal of political or commercial restraints, nor yet with the anti-social individualism of J. S. Mill, but with equality, fraternity, and the growth of universal humanity.] **Giovanni Vidari.** 'I concetti di fine e di norma in Etica.' [The end of action means that object towards which the will is directed and in the attainment of which rests satisfied. But such a notion involves, to begin with, the logical contradiction that the will seeks for its own annihilation. Further, self-satisfaction means pleasure, or happiness in the sense of permanent satisfaction. And this cannot be the moral end, the end of the will as such, seeing that pleasure and happiness differ from one individual to another. By parity of reasoning it is shown that neither can there be any universal rule for the will, the conception becomes self-contradictory when analysed. Prof. Vidari concludes that there are neither absolute ends nor binding rules in morality, but that there is a moral *law*, which is the affirmation of the will by itself, the self-realisation of its essence. And the study of those ends and rules of conduct which are observed to prevail in experience will be found helpful towards ascertaining what this is.] **F. C. S. Schiller.** 'L'Errore.' [An Italian translation of Dr. Schiller's contribution to the proceedings of the Congress.] **Francesco Filomusi Guelfi.** 'Della Filosofia del diritto in Italia dalla fine del secolo xviii. alla fine del secolo xix.' [A lengthy historical summary not admitting of further abridgement.]

X.—NOTES.

NOTES ON A CRITICISM.

In reference to the critical notice that appeared in your last issue of Dr. Ross's and my own edition of *The Philosophical Works of Descartes* now being published, I should like to make a few remarks. Dr. Ross is at present in Burmah and I have not had the advantage of discussing the matter with him, but I feel sure that he would agree with me in appreciating some of the criticism which is there made upon our book. Many of the points made by Prof. Taylor are valid, and he has detected certain errors which, when there is an opportunity, will be corrected. At the same time I cannot but think that in a considerable number of cases the criticism is not justified.

First of all we are severely taken to task for the scope of our book. We are told that amongst *The Philosophical Works of Descartes* we should have included the *Geometry*, the *Dioptric* and *Meteors* and a complete version of the *Principles*. The omission of the *Geometry* in particular is said to be a "capital fault," while the other Essays formed in Descartes' eyes an integral part of his *Philosophia*. Now I venture to point out that had these Essays been included it would have been absolutely essential that we should also have included practically the whole of Descartes' works and made no distinction between the philosophical and the scientific portions of these works. If we had included all that has value as bearing on what we may call philosophy in its application to the sciences, we should most undoubtedly have had to include the physiological treatises. Prof. Taylor talks of the *Geometry* as being "epoch making". But the *De l'homme* or *De homine*, to take an example, was certainly epoch making also, and perhaps even more so than the mathematical books. Certainly modern physiologists will be unanimous in telling us that this is so. And thus, had we followed Prof. Taylor's suggestion, the edition would have extended to many volumes instead of two, and the term "philosophical" would have ceased to indicate any limitation whatever. I cannot think that this is what the public would have understood by the name. They would have had reasonable ground of complaint, if, under the limiting title of *Philosophical Works*, we had included those writings of Descartes which are now commonly described as scientific in distinction from philosophical.

Then I am taken to task for using the French version unduly in the case of the *Meditations* and *Principles*. Now I hardly think Prof. Taylor can have remembered what Descartes himself said to Clerselier on this subject, as recorded by Baillet (*La Vie de Descartes* (1691), vol. ii., p. 172): "Sous prétexte de revoir ces versions, il se donna la liberté de se corriger lui-même, et d'éclaircir ses propres pensées. De sorte qu'ayant trouvé quelques endroits où il croyoit n'avoir pas rendu

son seus assez clair dans le Latin pour toutes sortes de personnes, il entreprit de les éclaircir dans la traduction par quelques petits changemens, qu'il est aisé de reconnoître à ceux qui conférent le François avec le Latin." Baillet sums the matter up thus: "Cet éclaircissement touchant la traduction des Méditations et des Objections est nécessaire non seulement pour justifier les traducteurs sur les changemens dont l'auteur est le seul responsable, mais pour faire voir aussi que la traduction Françoise vaut beaucoup mieux que l'original Latin, parceque M. Descartes s'est servi de l'occasion de la revoir pour retoucher son original en nôtre langue. C'est un avantage qu' a eû aussi dans la suite la version Françoise des Principes de M. Descartes fait par l'abbe Picot." As explained in the Preface to the *Méditations* the author's revision renders the French version specially valuable; it would have been unsafe to disregard even its minor changes: although only the more important variations have had attention specially drawn to them in the notes.

I may now be allowed to notice some individual points in regard to which the criticism seems a little harsh. Of course one knows the extraordinary difficulty there is in making a fair translation of any book and especially of adhering in any consistent way to certain equivalents of given words. I have myself read what might be called classic translations along with the originals and seen how far short they fall from consistency in this respect and how easy it would be to criticise them by applying literal methods of criticism. But in the following examples is there not a suspicion of hyper-criticism or is it merely a translator's hyper-sensitivity?

In the *Meditations*, page 170, I am charged with translating "*nisi simul effecerit ut quænam illæ essent cognoscerem*" "without having caused me in some measure to know what they are". (May I point out that I am not quite correctly quoted, for "at the same time" is omitted?) I have thus, I am told, interpolated in "some measure". These words, however, are taken from the French version approved by Descartes—"sans avoir fait en sorte en même temps que je sceusse ce qu'elles estoient".

At page 198 I have said "drinking is essential for the health of the body" whilst I should have said "conducive to" (quod ad corporis valetudinem potus conducat), since health is not a *substantia* and therefore has no *essentia*. Now I cannot conceive that any reader would for a moment take this "essential for" as implying that drinking is an *essentia* and health a *substantia*.

In page 378 I have translated "breuvage" by "concoction" ("We see in the case of those who have in illness taken some concoction with great aversion")—a rendering condemned as "vulgar" as well as inaccurate. "Breuvage d'amour," as we know, means "love potion"; but most of us think of the beverage in the light of a concoction rather than a potion when taken under the circumstances described by the author. Another "vulgarism" of which I am held guilty is that of "outside of the mind" (for *extra mentem*); and here I must shelter myself under the authority of R. L. Stevenson and other well-known writers who commit the same vulgarism.

Page 403: "they never give so much advantage to their enemies as to recognise that they are harmed by them". *Offensé* should, Prof. Taylor says, be translated "insulted" or "affronted," not "harmed". Perhaps "hurt" might be best of all, but "harmed" is not very far from the mark, as "injurier" or "blesser" is usually given as its equivalent.

Page 409: "a miser desires never to be away from his treasure in case he is robbed of it". This it appears should be "for fear he may be robbed of it" (de peur qu'il lui soit derobé). Is this not carrying criticism to an extraordinary point?

Page 415, I am called to account for translating "sang meurtri" as "battered blood" instead of "livid blood". Here I cannot agree with my critic for "livide" is used below, and why, if "livid" were meant should the same word not have been used in this place also? In the other case Descartes describes the colour of the slow-flowing blood in the veins; while the "mingled yellow and black like *sang meurtri*" seems to me to bear a more ominous portent. The dictionary rendering of *meurtri* is "bruised with blows," "covered with wounds," and no suggestion of "livid" is given or, I think, implied; and "batter," according to Webster, is "to beat with successive blows" . . . "to beat repeatedly so as to bruise". Thus it would seem that I have got pretty near the true meaning of the word.

I have, it appears, dubbed Regius "Physician" instead of "Doctor" as in the Latin. "Doctor" would have been more correct, no doubt; but seeing that a special Professorship of Medicine was with much difficulty established solely for Regius' benefit, one associates him above all with the subject he taught, and the profession with which he will always be identified.

Again (p. 449) "componere" in correct Latin distinctly means to "compile" as in the phrase "Liber ex alienis auctoribus compositus". To put together one's own writings, and so "compile" a book of them is by no means impossible.

I should have known, I am told, that the Lateran Council and not Leo X. "enjoined the philosophers". If Prof. Taylor will consult the official records of the Council he will find that the act "enjoining" the philosophers was published in the name and by the authority of Leo. To that act were added these words: "Datum Romæ in publica sessione in Lateranensi sacrosancta basilica solemniter celebrata anno Incarnationis dominicæ MDXIII. XIII. Kal. januarii pontificatus nostri anno I."

In conclusion, I must express indebtedness to Prof. Taylor for pointing out three awkward misprints. As I have noticed the same number of misprints or clerical errors in his review, he will sympathise with my annoyance that they should have escaped my own eye in revising the proofs.

I have not dealt with any points connected with what is more especially Dr. Ross's work as I hope he may be able to make his own reply.

ELIZABETH S. HALDANE.

RANGOON COLLEGE, BURMA.
13*th November*, 1911.

TO THE EDITOR OF MIND.

DEAR SIR,

I have asked my collaborator to forward to you the following replies to the criticisms made by Mr. A. E. Taylor in MIND, N.S., No. 80, on that part of *The Philosophical Works of Descartes*, vol. i., for which I am chiefly responsible. The strictures our critic has made on the general scope of our work do not effect either of the translators, as they did not select the treatises to be included in this publication. But the Cambridge University Press is not likely to heed the reproach of not having included Descartes' physical among his philosophical works. That in a desire for the translation of other works not strictly philosophical the present translators concur, any one will see who reads the preface to vol. i.

I do not complain of Mr. Taylor's truculent manner, except in so far as it leads him to magnify the extent of the blemishes he has found and to

put the worst interpretation on every slip of the pen or error in proof-reading. I have more reason to object to his want of candour. Thus when (p. 543) complaining that the reader must consult the Latin or French to discover whether "simple" means *simplex* or *facilis*, whether "intellect" means *ingenium* or *mens* or *intellectus*, he omits to mention that it is stated in a note on page 5 that the word corresponding to 'simple' is on this occasion *facilis*. He conceals the fact that it is again and again pointed out when *ingenium* is the word translated. Similarly the use of *naturas* is pointed out on page 16. So, in many other cases, the translators have indicated the Latin or French word translated, doing so, since there was not to be a fully annotated edition, only when they thought the reader might otherwise be misled.

Similarly also I used my discretion about including and omitting notes on the text of the Adam et Tannery edition. Mr. Taylor's method of criticism is to censure every omission and keep silent in every other case.

It is true that I have to apologise to the reader for three misprints *readily* for *rashly* on page 14, last line; *conncctcd* instead of *converted* on page 43, and *not* instead of *not precisely*, page 61, paragraph 2. That my critic should take these as errors of a more serious nature, is a reflexion either on his candour or on his acumen. An exacting critic should take care that his own use of terms is quite accurate. But in alleging that my translation on page 3 (Mr. Taylor says page 2) involves a breach of the Law of Contradiction, he confuses opposite with contradictory, and seems to forget that contrary opposites may both be false.

I shall pass by the occasions on which Mr. Taylor accuses me of using 'verbiage' and 'slang'. The reader can judge and also estimate the correctness of the view which Mr. Taylor takes of his function as a critic in thrusting matters of such minute importance into the forefront.

There are matters of more moment in which I should be glad to have advice, not believing in my own infallibility nearly so strongly as my critic in his. For example, the translation of *æqualis* and *æqualitas* caused me much thought; I preferred to use the word *uniformity* rather than the technical *equation* as I was translating a work dating from a time before the consolidation of technical usage. But at least I have throughout made the reader aware of what I was doing by means of notes, a fact which my critic once more suppresses. Similarly my rendering on page 30 is not a 'pure mistranslation,' but an attempt to express the passage so as to fit in with the context of Descartes' thought.

Once more I dissent from Mr. Taylor's opinion that *componere* in the statement of rule xii (p. 35) means *to conjoin, complicate*. Descartes' treatment of the rule further on (p. 40) bears out my translation.

But readers have doubtless by this time formed their own opinion about the value of Mr. Taylor's criticisms.

Yours truly,
G. R. T. Ross.

A REPLY TO A CRITICISM.

I CANNOT but feel honoured by the space which is given in the last number of MIND to a criticism of my views. And I should like to be permitted to offer some remarks on this criticism. I find myself however here in a difficult position. So far as my own views have been misapprehended, I could hardly make this clear otherwise than by an attempt to re-state them throughout. And again so far as Mr. Strange argues from a position which I reject, I should not feel myself justified

in dealing with that position as it is left in his article. All that I can do, therefore, is to attempt to indicate briefly a series of apparent misconceptions with regard to the doctrines which I hold.

(1) Mr. Strange apparently takes me to identify feeling with reality. Everything, I understand him to say, arises out of feeling and returns into it. This of course is to me a fundamental mistake for which I am in no way responsible. The mistake runs through and vitiates a large part of Mr. Strange's criticism. It is another side of the same error when I am told that for me feeling is indisputable and beyond criticism. I am unable to do more here than once more to express my surprise.

(2) I am further taken to limit the actual to a series of momentary and fleeting psychical events. I cannot think that my critic has the least idea of what to me is the position of events in time, or again of psychical existence and mental facts of the moment, and of how all this to me depends on ideal construction from the basis of immediate experience. He evidently takes mental facts as being for me something which in their own shape are ultimately real (p. 488). The only answer which I can make here is a general reference to what I have written on the subject. Again (p. 482) I am offered a dilemma on the ground that I deny "that the soul is existent". I however thought that what I held was that the soul is existent, and that its existence involves inconsistency. How could I possibly deny the existence of the soul?

(3) The assertion that I identify feeling with "the self or individual" (pp. 464-465) once more causes me surprise and prepares me for anything or everything in the way of a conclusion. But I pass from this to notice the argument (pp. 465-466) that, if my doctrine as to feeling were true, I at least could not know this. Mr. Strange is apparently unaware that I have myself raised this objection and tried to deal with it (*Appearance*, pp. 93, 110, and MIND, No. 69). What I have written here may be worthless, but how can my critic claim a right to treat it as having no existence?

(4) With regard to my alleged failure to recognise any act or subject in judging, and my inability to distinguish myself from other selves, I will merely refer to what I have written on these heads,[1] and will pass on to another misunderstanding. When I speak of using content as "loose," Mr. Strange takes me to mean that this content in fact is removed and that the actual fact is destroyed (pp. 472-475). He does not argue that this is what I *ought* to hold, but treats me as holding it. I am aware of no justification for this interpretation except that the result is of course ruinous to myself.

(5) On page 478 there is a passage which I notice because it exemplifies a common misapprehension. Mr. Strange, like some other advocates of realism, fails to understand the position which he is anxious to attack. The contention which he has to meet is this, that he is taking a mere abstraction for reality, and that the burden of showing that what we contend is an abstraction is really more, rests properly with him. Such an idea seems not to have occurred to him, but he will find that it is perhaps more worth his attention than the ingenious arguments which, I must acknowledge, he does *not* attribute to myself. In the same way I would add (though this has no reference to Mr. Strange) that it is idle to advocate the ultimate reality of change, unless you at least consider the view that mere change is no more than an abstraction.

The above misconceptions, it seems to me, leave little value to Mr. Strange's article as a criticism of myself. Certainly my views may be no

[1] On the second of these I have touched recently in MIND, No. 74, pp. 155-156.

better than those which he has attacked, but at least they are different. But there are doctrines which Mr. Strange has incidentally laid down, which, if they were tenable, would render detailed examination of what I hold quite superfluous. As to that I am entirely of one mind with Mr. Strange. But he does himself here, I must think, a most serious injustice when he speaks (p. 479) of his having "tried to elaborate" his doctrine. That is precisely the thing which on the contrary I would invite him to do, for, as he has left it, I feel that I could not in common fairness to himself attempt to criticise his position. I wish to keep in mind that, if a view opposed to my own is untenable, it does not follow that I myself am not equally wrong; just as the pointing out of misconceptions may, I know, do nothing to remove real difficulties. But if Mr. Strange would seriously apply himself to such a statement of his doctrine as would enable the reader to see how it can hold against familiar objections, I venture to think that, far from losing his time, he would produce something which would be read with attention and interest.

F. H. Bradley.

"REAL KINDS" AND "GENERAL LAWS".

Dr. Mellone's interesting discussion of "Real Kinds" and "General Laws," in Mind, No. 78, raises several points of considerable importance.

With respect to the Aristotelian Doctrine of the γένος and εἶδος and the Platonic doctrine of the transcendence of the εἴδη with their mediæval counterparts, *universalia in rebus* and *universalia ante res*, he says the "question is not what these doctrines meant to the consciousness of Aristotle or Plato, or the Scholastic Realists"; it is, "of the implicit philosophical tendency of these epistemological speculations and of its statement in terms of modern thought. It is irrelevant," he continues, "to object that the modern statement involves an idea which was not part of Aristotle's or Plato's conscious thinking and would have greatly disturbed his general system of the world."

Now it is of course stimulating to follow a germinative idea down the ages, see how it is modified by the thought and knowledge and beliefs of each succeeding generation, how it is presented by this writer and by that, how it is applied, how illustrated, how enriched, how impoverished. But it is well to remember that an idea, as it is won, and as it is presented by every successive consciousness is not the same; ideas are not dead things which we can transfer intact from one to another; we have to seize them, mould them, create them by our own activity; every presentation of an idea is something new.

Dr. Mellone would not, I believe, deny this; but what I want to lay stress on is that it is much more in the interests of clear thinking to emphasise the contrasts between the ancient and modern way of regarding the universal than on their similarity, which indeed according to Dr. Mellone's own showing exists only in underlying philosophical truths which were not apparent to the original thinker, and which in their modern statement involve an idea which would have greatly disturbed his general system of the world. If in biology we were always to dwell on the debateable ground where species seems to merge into species, we should never arrive at any clear ideas; from its very nature thought requires to find or to make well-marked distinctions or division lines in its material. In the same way when the material thought about is *thought* itself, when it consists of concepts and theories, it is the distinctions and oppositions which ought to be thrown into relief in order that the

one theory may stand out against the other, and thus both be made plain.

Again Dr. Mellone says, "Every real law of Nature is *ante rem*, and would never come into action at all if the circumstances to which it is applicable never occurred; on their occurrence it is *in re*, and waits to be traced by us in the empirical result".

This is of course a common enough way of expressing the matter; but when we come to examine the language, is it not dangerously figurative? In what sense does the law come into action when the circumstances occur? Does not this mode of expression give countenance to the conception of a law as something over and above the course of events and guiding their outcome? In what sense does the law wait to be traced by us? Dr. Mellone himself would, I know, in this connexion hold no parley with the suggested interpretation of the term law; but his hypostatisation of the term in the sentence criticised seems to me not unlikely to lead to dangerous error.

For can a general law, in Dr. Mellone's sense of the term, *viz.*, a hypothetical or disjunctive judgment, be said to exist at all before it has been discovered? Can it exist except in a mind? Leaving aside the possibility of its existence in the creative mind—if we posit such a mind—then it is *illustrated in re*, but it does not exist there as a universal; nor can it exist as a universal except in a rational mind. The law of gravitation we may say exists *ante rem* with reference to the fall of an apple to-day, but it did not exist *ante rem* with reference to the fall of an apple before Newton's time. Science suggests the universal, and then sees whether things accommodate themselves to it, in which case it becomes a law; in its perfected form it becomes a law of quantitative relation.

In connexion with this discussion it might be pointed out that not only does science create laws, which as such are real only in minds; but she also in a sense *creates things* which have a reality in themselves similar to that which we attribute to the external world. Not enough stress, I venture to think, is laid upon the difference between these two modes of creation. Philosophy gives all her attention to the general laws concerning which many words more or less valuable have been written, but she passes over with slight interest the creation of things. Among these things we have in physical science the atom, the molecule, the ion, the ether, and in modern psychology the idea-complexes of Freud which are helping in the coming revolution of our conception of the self.

In creating these things, science is sometimes accused of deserting the real world for an imaginary universe of her own. Sometimes this is the case. The most famous case of this "desertion" is to be found in Newton's corpuscular theory of light. The corpuscles were solid particles of great minuteness which issued at high speed from the source of light and bombarded space. Reflected from objects of perception they entered our eyes and gave rise to sensations of sight. But on the things thus created by science a very stringent condition is imposed. This is that by their essential nature they consistently explain the phenomena of our sense world. In this explanation the corpuscles finally failed; and the wave theory of light, which has hitherto passed all the tests which we can apply, supplanted Newton's theory. The corpuscles then had no real existence. They had made their claim to reality, so to speak, but had not justified it. But had they been successful, had they sufficed to explain all the actions of light, then we should have accepted them as existing things. They served their purpose, they served as a peg to hold together several of the phenomena of light, such as reflexion and refraction; and any scientific construction which thus unifies phenomena

may be regarded as a stage in our progress towards reality. The more phenomena it unifies, the more certain we may be that we have actually reached reality in the physical sphere.

It is true we may not feel certain of the reality of any of the things yet created by science, for we are still but knocking at the gates of knowledge; yet we can hardly doubt that in time the penetrating insight of genius will make the construction which will absolutely coincide with reality. Meantime my point is that if or when this point is attained, and the things guessed at by science are there, then science has not created them in the sense that she creates the general laws; she has divined or discovered them.

To return to the point from which I started, I would suggest for Dr. Mellone's consideration the question whether it is not in these things divined or guessed at by science rather than in the general laws that we have the modern form of the 'real kinds' of Aristotle.

MARGARET DRUMMOND.

NOTE ON ARISTOTLE AND THE MOON'S AXIAL ROTATION.

I AM asked by a correspondent in the last number of MIND (July, 1911) to explain what I mean by saying that the moon's axial rotation is a matter of ocular demonstration, and that it ought as such to have been admitted by Aristotle. If my critic will take the trouble to walk round a post or other fixed object with his face turned towards it the whole time, as the moon's face is turned towards the earth, he will find that he cannot do this without describing a complete revolution on his own axis. Or he may reach this conclusion without rising from his chair by drawing a diagram representing the positions successively occupied by a spherical body revolving in a plane orbit about another body to which it always turns the same face. This is how the moon actually behaves; this is the proof of her axial rotation; I call this a proof by ocular demonstration —supplemented as every so-called proof must be by certain abstract reasons; and this proof was just as accessible to Aristotle as to us.

Let me add in justice to the Stagirite that if the moon were carried (as he supposed she was) round the earth by an etherial sphere, she would equally present the same face to us at all times. But in the passage to which I referred he seems to think that such an appearance on the part of a free body would be a proof of its axial immobility. Aristotle was a most acute observer of surfaces; but in my opinion his was not the mental vision to see through a millstone.

A. W. BENN.

New Series. No. 82.] [April, 1912.

MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY

I.—RELEVANCE.

By F. C. S. Schiller.

When a judge has to try a case, he has to be very strict about what evidence and what pleadings he will allow, and what not. Otherwise he will neither finish his case within a reasonable time, nor arrive at the truth about it: for the good evidence which might lead to the discovery of the truth will be choked up in masses of bad evidence that leads nowhere or in the wrong direction. Hence he must not accept anything that is or might be offered or said, and will often find it difficult to draw the line. He can also show the excellence of his judgment in drawing it aright. For everything is, more or less remotely, connected with everything else, and so, if everything were admissible, the case would drag on *εἰς τὸ ἄπειρον*, like the second Dreyfus trial, or that of the Neapolitan Camorrists. Much that is unimportant and has little bearing on the case must thus be excluded, and the more can be excluded and the more attention can be concentrated on the really vital features of the case, the more expeditiously can the case be decided, and the better will the decision be. And of course good judges and good lawyers generally must speedily discover all this.

But why, you will think, enunciate such platitudes? Is it not all the commonest of common sense? And what on earth has it to do with philosophy? The more you wonder thus, the more you will be surprised to hear that the simple considerations I have brought before you constitute one of the world's greatest discoveries, and that very few have made it. Even the lawyers, who one would think could hardly help making it, have not done so everywhere, as is shown by

the state of the law and the laxity of the rules of evidence in most countries. Language affords still better testimony. For no language, with the single exception of our own, has become sufficiently conscious of the facts I have described to devise for their expression a regular vocabulary. Philosophy has so little grasped them to this day that its favourite principles are in direct contravention of them, and that when it sees them they must entail a complete overturn of many of its most cherished doctrines. And lastly Logic, though the facts were lying as it were at its door, so that it could not reach the fresh air without seeing them, has preferred to stumble past them and to plunge into confusions unspeakable, rather than to save itself by recognising them.

The great discovery of which I have been speaking is the notion of *Relevance*, and so far as I know the word is a unique possession of the English tongue. In English we have a complete vocabulary for expressing this notion and its opposite, *viz.*, *relevance, relevant, irrelevance, irrelevant.* The other great languages have nothing similar: the whole vocabulary is untranslatable, because the idea is not yet fully recognised by any other people. Neither in Greek nor in Latin, neither in French, German, nor Italian can the notion of Relevance be neatly expressed, as is seen when we compare the nearest approach to the English phraseology, the French *à propos, mal à propos.* Where the conception is indispensable and forces itself upon the mind clumsy paraphrases have to be used, some of which, curiously enough, are to be found also in English. Instead of saying 'it is irrelevant' we sometimes say 'it is immaterial' or 'it does not matter' or 'it is not to the point' or 'not to the purpose,' 'it is unessential or unimportant'. This great variety of expression, exhibiting the struggles of human intelligence to fill a newly discovered lacuna in language by adapting and specialising various already existing terms, and the persistence of an inferior by the side of a superior mode of expression, would seem to indicate that the recognition of the notion is comparatively recent. And this is what we find to be the case. According to the Oxford *English Dictionary*, the group of words which expresses the notion of Relevance originated in the middle of the sixteenth century, the first recorded example being 'relevant' in 1560. 'Relevancy' and 'relevantly' are traced back to 1561, but 'relevance' does not occur till 1733; curiously enough, 'irrelevant' is first quoted from Burke, in 1786, and 'irrelevancy' from Bentham, 1802. It is curious, and perhaps accidental, that 'irrelevant' should be over two centuries younger than 'relevant'.

There are two remarkable facts about these first appearances. The first is that the words appear in the same sense as they have at present, and that their meaning has never wobbled or developed: this is sufficient proof that they filled a long-felt want, and that their sense was not varied because it was indispensable.

The second is that the first recorded uses of 'relevant,' 'relevancy' and 'relevantly' *occur in Scotch laws.* This goes to show that the notion was a discovery of the lawyers in the ordinary exercise of their profession, and that here as so often practice has been the instructor of theory. The relevance of our analysis of the judge's work in hearing a case is shown by the probability that it was a judge who invented the notion of Relevance. We may take it as highly probable that its inventor was a lawyer and a Scotsman; he was certainly a genius. For did he not find expression for a notion of capital importance, for which the genius of no other language had found words, and did he not do so in a distinctive manner, vastly superior to the clumsy gropings of the other tongues?[1]

The distinctive advantages of the term *Relevance*, as compared with its functional equivalents in English and the other languages, are fourfold. They lie in its bringing out (1) the *subjectivity*, (2) the *selectiveness*, (3) the *honesty*, (4) the *disputableness* of the 'relevant'.

(1) The 'relevant' views the relations between the thinker and his object from the *subjective* side. I do not mean by this, of course, that the relevant is an arbitrary creation of the individual thinker, which pays no regard to any sort of fact. On the contrary it contains an implicit reference to an objective 'given,' out of which the relevant part has to be selected, and an argument which ignores facts is most certainly to be condemned as 'irrelevant'. Still 'relevance' is not conceived as a quality residing in the thing thought of *per se*, but *lies in its value for us and in our attitude towards it.* It implies a relation to a human purpose by its very etymology. The '*relevant*' is that which is *helpful* and affords us *relief.* This is quite frankly confessed; there is no pretence of turning the usefulness of things for our purposes into an attribute of the things in themselves.

By the critical honesty of this avowal we escape from the naïve objectivism of primitive thought and the manifold confusions to which it leads. The other languages are all

[1] These are well illustrated by Plato, who takes, in *Rep.* 453-455, about two pages to say that the differences between men and women are not *relevant* to the discharge of their duties towards the State.

full of the fallacy of projecting into the thing the values which it may have for our varying purposes, and so entangle themselves in hopeless puzzles as to how the same 'quality' can be now 'essential' and now not. This ought to be a great help to believers in the reality of 'essences,' as relieving them from a misuse of 'essential' which enormously adds to the difficulties of their position. The existing terminology in most languages fails to discriminate between objective and subjective 'essence,' *i.e.* relevance. *οὐδὲν πρὸς τὸ χρῆμα, nihil ad rem, unwesentlich, sans importance, senza concludenza,* are all inferior attempts to express the notion of 'irrelevance,' which it is practically more urgent to express, because of the ease with which thought gets lost in the irrelevant. But they are all *objectivist* phrases, which try to render the object responsible for the guidance of the thought. We have them also in English; as witness, 'it is immaterial,' 'not to the point,' and 'does not matter,' and the seventeenth century use of 'irrelative' for 'irrelevant'; while as if to show that the objectivism is a verbal accident, and not really intended, we find also subjectivist terms with precisely the same meaning in 'not to the purpose' and '*mal à propos*'. But 'relevant' is clearly superior even to these, because it expresses not only the *relation* to purpose, but also the *value for the purpose.* By thus expressing the relation of thought to purposes and values the unknown inventor of 'Relevance' has anticipated the development of philosophy by about 350 years!

(2) 'Relevance' plainly implies *selection.* Not only does it not profess that the 'relevant' is the *whole* of the matter, or imagine that the whole is relevant, but it plainly warns us that the relevant has to be *extracted.* It does not therefore *deny the existence* of the irrelevant, and indeed implies that any amount of it may be given; it only denies that it is 'helpful'. It is to be treated, therefore, *as if* it did not exist. It is a request to put the irrelevant aside, consciously and resolutely, as something which must not be allowed to affect our minds and to impede our progress.

The 'relevant,' therefore, stands out of a chaotic whole as a *selected extract,* and raises the general problem of our right to make such extracts. Is it the sheer bit of human favouritism, it has hitherto seemed to the old logic, or is it the most indispensable, characteristic and 'essential' feature of human thinking, as the new logic is beginning to perceive? At any rate there can be no doubt that whoever says 'relevant' means '*partial,*' in both senses of the word, and does *not* mean 'all-inclusive'. Relevance is the product not of

an attempt to *include* everything, but of an effort to get rid of the rubbish, to *select* the *humanly valuable* part, and to exclude, reject and ignore the rest. And the peculiar excellence of the term lies in its not representing this procedure as due to any intellectual shortcoming by way of negligence and inattention, but in ascribing it to conscious, willed, purposive *concentration upon the point.*

(3) Hence 'Relevance' is a peculiarly *honest* word, and contrasts strongly with the periphrases for it, which all tend to conceal the fact that the selection of the relevant, just because it is a selection and may select too little or too much, must always be a *risky* affair. The other words all try to disavow this risk, and pretend to get a guarantee for the correctness of the selection out of the nature of the whole; and so they mostly lapse into downright mendacity. It is not literally true that the irrelevant is 'irrelative,' that *nihil pertinet ad rem*, or is '*beziehungslos*' or '*belanglos*'. The 'irrelevant' facts are *just as much facts* as the 'relevant'. Nor have we a right to call them '*unessential*': for not only have we no means of knowing whether a thing would be what it is (or even whether it could be at all) without the least of its 'accidents,' but the distinction between 'essence' and 'accident' fails to do duty instead of that between the 'relevant' and the 'irrelevant'. For one thing it cannot be made as relative, flexible and shifting, without being made ridiculous. For how can the 'essence' of a thing, being 'objective' and in the thing, vary, like a chameleon, according to the purpose with which we regard it? 'Relevance,' on the other hand, does not take in vain the name of the immutable 'essences' (if such things there be); it professes nothing but dependence on the purpose of the moment: the least change in this may render relevant what was irrelevant before, and irrelevant what was most relevant. For example, if the headless flayed corpse of a female child, which can be medically shown to have breathed, is found in a field, all the evidence will be highly relevant which indicates the person who put it there: but the suspect may at once render it irrelevant by admitting that he threw away the remains, and then exculpate himself on the charge of murder by explaining that the supposed 'child' was the carcase of a young chimpanzee he had been given to stuff. The relevant evidence will then become the *skin* of the corpse, which in the case referred to was produced, and easily seen to be that of an 'ape' and not of a 'girl'. Yet can it be said that *per se* the skin was less 'essential' to the girl than to the ape?

Terms, therefore, like 'unessential,' 'unrelated,' 'imma-

terial,' etc., *do not express what is meant.* As compared with 'irrelevant,' they are vague, inexact, unscientific and *false*, and their use should be eschewed in every language which possesses more exact and expressive words.

(4) 'Relevance' is always *disputable.* An adversary always has the formal right of denying that the evidence I allege as relevant really has the bearing on the case which I assert, and that what I regard as irrelevant really is so. Hence only an examination of the concrete case itself will decide what is really relevant. Now this at once emancipates the relevant from the control of Formal Logic. It is impossible to decide formally, *a priori* and in the abstract, how far the region of relevance will extend. The selection of the relevant must needs be left to the judgment of those who are cognisant of the actual facts of the case. And even among these there will be differences. The 'relevant' always forms a sort of radiance emanating from 'the point'; but to some eyes this 'aura' will extend further than to others. For some minds have a much keener perception of the relevant than others, and are able to go straight to the 'point' (or 'core' or 'gist'), while others have painfully to work their way through to it by gradual rejection of the irrelevant. Clearly also those for whom the aura is smaller and the 'relevance' lies closer to the point have the better minds.

Thus Relevance *is not a formally visible* and permanent quality of things at all, but belongs inalienably to the logic of personality and real knowing. Nor can an argument which proceeds on considerations of relevance ever be pronounced 'valid' in virtue of its 'form'. To one who does not know the exact circumstances of the actual case, the irrelevant argument will look just as good and valid formally as the relevant. Thus *Relevance is never a matter of form*, and this no doubt is partly the reason why Formal Logic has cut the notion dead. Its self-preserving instinct warned it that it could make nothing of it, and that if ever the world awoke to the importance of Relevance, there would be an end of Formal Logic.

Having by this time familiarised ourselves a little with this strange notion of Relevance, let us now pass to consider its meaning for Logic. Its logical importance is enormous, although Logic has never recognised it, but has lost its way in the swamps of Irrelevance, by reason of its vain pursuit of the whole. Now the use of the conception of Relevance in practical reasoning and in science means a *repudiation* of this ideal of all-inclusiveness, and therefore, if it is sound, will involve a complete reconstruction of logical theory,

besides having an important bearing on the most popular type of metaphysics. The old Logic may, it is true, appeal to philosophy for support in its assumption that truth lies in the whole rather than in the *relevant part;* and thus the existence and use of Relevance seem to precipitate a sharp conflict between the theory of scientific and ordinary reasoning on the one hand, and that of orthodox Logic and philosophic thought on the other. For Logic has always hitherto assumed that *all* facts have to be considered, and philosophy has always professed to aim at the inclusion of the whole; both therefore *are bound to deny the existence of irrelevance,* at any rate for their purpose. Whether this conflict is inevitable or due to a mistake, we shall be better able to estimate after we have illustrated the complete dependence of all non-philosophic reasoning upon the notion of Relevance.

To consider first the case of ordinary thinking. We could not come to the simplest decision, we could not perform the easiest act of thought, without extraction of the relevant. Unless we kept our eyes fixed on this, and our heads clear, the floods of irrelevance in which we are merged would rise up and choke us. If we allowed Logic to make it a condition of judgment and action that *everything* must first be taken into account, if we were not allowed to make *selections,* if nothing might be disregarded, we could neither act nor think. For we cannot manipulate the whole universe at once, nor enunciate the total truth in a single gasp. All effective action and all effective thinking, therefore, must in practice proceed upon a recognition of Relevance, whether or not the notion is consciously formulated, and consistently applied.

Nor is it difficult to note, moreover, that in point of fact no sane mind ever makes a judgment which it does not conceive (whether rightly or wrongly) to be relevant, and that 'Relevance,' and not 'Truth,' is the supreme controlling power in the making of judgments. *We do not, that is, assert whatever we believe to be 'true,' but only such portion of the total truth as we judge to be 'relevant'.*

(*a*) We do not go about asserting things merely because they are true. The truths worth asserting are not the indisputable truths of the first water, but those struggling into existence, which others do not yet see. If you went about reciting the Multiplication Table you would certainly be regarded as an intolerable bore, and would probably be locked up as a lunatic.

(*b*) Truth, then, is no excuse for irrelevance. It is common to say,' What you allege may be quite true, but it is not relevant: kindly keep to the point'; and the only way to

meet this objection is to show that the allegation *is* relevant, not to the universe at large, but to the point at issue.

(*c*) We do not *want* to know the whole truth, but only that selection from it which bears on our problems and answers our questions. If it is objected to you that the whole story has not been told, it is a good reply to plead that all that is relevant has been told, but when you ask what a flower growing in a wall is, you do not usually want a metaphysical disquisition about the interconnexion of all things in the universe—even in verse. An irrelevant answer to a question is therefore as bad, and more irritating, than none at all.

(*d*) It is a psychological fact that we never express the totality even of what is before the mind as we frame a judgment. *E.g.* in order to say 'It is hot,' I do not think it is necessary to mention that I am suffering from indigestion, a corn on my toe and a cold in my head, and wishing that a less fatuously conventional opening of a conversation with a lady I do not want to talk to at all had occurred to me. All our personal feelings are in fact habitually ruled out as irrelevant preliminaries to our assertions, and the persons who allow them to intrude into their conversation, and even to become its staple food, are condemned as a disagreeable sort of bores.

We express, moreover, all we *know* as little as all we *feel* in any judgment. Even the blankest and stupidest mind *knows* far more than it ever *says* on any occasion. It too selects, perhaps injudiciously, before it publishes its fatuities.

The notion, therefore, which haunts the orthodox logician as an unachieved ideal, *viz.*, that of blurting out the totality of truth in a single judgment, never occurs to common sense as a thing to be rationally aimed at, and indeed strikes it as highly ludicrous. For after that, what, pray, would be the next remark? Merely the same thing over again? But why repeat it, whether to those who know and accept it, or to those who do not understand or believe it? Should not the ideal sage, after achieving *one* absolutely true and all-inclusive judgment, lapse forthwith into unbroken silence for ever afterwards?

(2) In science we hear exactly the same story. The sciences, as philosophers never seem to weary of telling them, are all *partial*. That is, they select aspects of the whole for special treatment, and regard as irrelevant the rest, in which they are not interested. But what if the sciences, instead of meekly submitting to philosophic rebuke, should prefer to brazen it out, and declare that the philosophers' reproaches

rest on a complete misapprehension of the nature of science? The philosophers, after all, have not yet shown either that it is possible to treat the whole in its integrity in a scientifically profitable manner, or even that it is logically possible to conceive the human mind as proceeding otherwise than by a selection of what seems relevant to its cognitive purposes. If they allege that in philosophising they proceed *without selection*, they are begging the question, and moreover may possibly be mistaken, while the impossibility of their aim may explain the failure of their efforts.

But at any rate there can be no doubt about the nature of ordinary scientific procedure. (*a*) Every science begins by marking out its general territory, and henceforth means its assertions to be relevant to that. Until these limits are pretty well understood, and it can be pretty definitely stated what assertions are relevant to its researches and what not, the science remains in its nonage. There could be, for example, no science of mechanics, so long as it could be thought relevant to allege, as the cause of stellar motions, the love which the heavenly bodies were supposed to bear towards the Perfect Form of the Prime Mover.

(*b*) All the 'facts' of every science are governed by the general conceptions of what is for it relevant matter, and selected (or rejected) accordingly. This is why an engineer does not 'observe concerning the sky' before he launches his ship, why a physicist does not take the auspices before reading off his thermometer, why a physiologist does not note the appetite of sacred chickens before dissecting a frog, why a doctor does not record the conjunctions of the planets before administering a pill, why a botanist does not collect his specimens by the light of the full moon, why a milkmaid does not perform the whole religious ritual of the Todas before churning her butter, why a mathematician does not vow a candle to his patron saint if he happens to begin an investigation of transfinite numbers on a Friday, etc. It is not that these are not facts that might be noted, and indeed would have to be noted if completeness were the aim of science; but it is their grasp of the relevant that saves scientists from such follies. So they are judged to be irrelevant, and such judgments rest securely on great masses of scientific experience.

(*c*) All the formal accounts of scientific 'induction' are manifestly nonsense, until it is noted that the phenomena argued from, and about, must be 'relevant'. It is clear that no two cases can ever occur in which literally *no* circumstance has changed *save one*, or which have *only one* circumstance in

common, so that the Methods of Difference and Agreement could be applied to them. In the actual illustrations given of scientific procedure, therefore, the logicians, with singular astuteness or innocence, always select *relevant* points of difference or agreement. But though this is always assumed, it is never avowed. Nor would the avowal, if it were made, set right the Formal logician's theory of Science. For his accounts would then become nonsense in another way, because, as we saw, there can never be any formal test or guarantee of Relevance. All of which, however, merely shows how little Formal Logic has grasped the real nature of Scientific reasoning.[1]

Clearly, then, Science finds the conception of Relevance just as useful and indispensable as does ordinary thought.

We come then to the question whether Philosophy stands alone in its ability to dispense with Relevance. At first it certainly looks as though Philosophy could do without it. At any rate the philosophers think they can. They always profess to aim at all-inclusiveness, and in certain directions, at any rate, they appear to have very liberal and elastic notions of the relevant. If then their conception of their craft should be right, and if their actual procedure can be shown to substantiate their claims, we should indisputably get the anomaly already mentioned, *viz.*, that there would be *two* methods of knowing, the one employed in science and in ordinary life and resting upon the selection of the relevant, the other peculiar to philosophy, aiming at all-inclusiveness and resting upon a denial that any fact, however humble, trivial and repulsive, can be irrelevant to the cognitive synthesis.

But does the practice of the philosophers bear out their theory? Do they in fact try to include everything, to condemn nothing as irrelevant, as they think they ought to do? With all deference to the imposing array of philosophic 'systems,' I cannot see that they do. For they all seem to rest on enormous amounts of selection, and to leave out vast masses of fact. Indeed, even to a lenient and partial critic like myself, they seem in fact to leave out very much more than they manage to include, while from a more severely common-sense standpoint they would no doubt seem to leave out, as philosophically irrelevant, nearly all the things that are humanly interesting and important.

Eleaticism, for example, which it is difficult not to admire as still the supreme example of formal metaphysical consis-

[1] See further my *Formal Logic*, ch. xix. § 7.

tency, seems to have eliminated the whole content of the world, save that it *is*, and (perhaps) that it is spherical. In the rarefied atmosphere of its abstractions, nothing else seemed relevant to reality. But is not this a great triumph of selectiveness?

Philosophers, however, are generally disposed to admit (we need not inquire too meticulously with what right) that the Eleatics rather overdid unification by omission in their monistic rejection of *all* phenomena, and that Platonism improved on Eleaticism by allowing them to wallow in a fashion between Being and Not-Being. This, perhaps, is something of a concession, but it can hardly mitigate the fact that phenomena, in Plato also, are still unreal as such, and irrelevant to (true) reality, so that the pseudo-existence of such misbegotten crosses between Being and Not-Being contributes nothing to the meaning of the Whole. In fact it is the distinctive tenet of Platonism that the Ideal alone is relevant, and that Sensible Reality is judged irrelevant *en bloc*.

Aristotle, who had much more of the temper of the man of science than Plato, was under less temptation to exclude facts merely because they did not fit into his system. He usually contents himself with inventing a category for whatever will not fit into his other categories. 'Chance' and 'Matter' are such categories in his system. But even Aristotle made no provision for the individual as such, *i.e.* for the points in which one individual of a kind differs from another. Such differences are always treated as logically null and negligible—falsely as Darwinism has since shown. *I.e.* it is always assumed that they cannot affect the unity of the universal and the certainty of the classification of the particular. But as these differences certainly exist, what is this but simply to rule them out as irrelevant, and to renounce the ideal of including everything in your synthesis?

It would be wearisome to go through the whole list, even of the first-class philosophers, with this uniform result. They all unhesitatingly practise unification by omission, they all agree in treating individual differences as metaphysically unreal, without perceiving how important and all-pervasive a feature of the given they are thereby excluding. Even Hegel, who had some inkling of the viciousness of philosophic abstraction, puts them down to a 'contingency' of the given as inexplicable as it is incurable. The rest gratify their philosophic craving for systematic unity by still more riotous omissions. Hardly any one manages to construct his synthesis without excluding *Time* and *Change* and *Novelty*. Spinoza, who is one of the more resolute unifiers, expressly

excludes *values*.[1] *Error* and *Evil*, which rather jar upon the human feelings even of the most austere, they generally attempt to rule out by calling them 'negative'. That all 'partial' views may justly be excluded simply *qua* partial, is treated as self-evident, without observing that all human views are necessarily 'partial,' including therefore those of the authors of these syntheses, so that they really refute themselves by the very law of their construction.

Yet both consistency and clearheadedness really declare that no total view can be strictly all-inclusive which does not include also *all the partial views*, not transcended, transmuted and transmogrified, but *qua* partial, and in their full unmutilated individuality. The idealist's 'Absolute,' if there could be such a thing, and if it could have a mind, would have to know, not only the whole truth and goodness of things as they appear to complete understanding and perfect purity, but also the whole gamut of errors and all the degrees of ignorance and illusion, *as they exist in all its blinded and deluded 'parts'*. It must know, *e.g.*, not only the exact moment of each being's predestined death, and the necessity of its destruction for the perfection of the Whole, but must also share the ignorance and agony with which each being views its fate. As, therefore, everything is such that there is some one who does not know it and cannot do it, the Absolute would have to be at once omniscient and omninescient, omnipotent and omni-impotent; nor could it be the former, unless it also were the latter. Similarly it must not only be a pattern of every perfection, but also a realised ideal of every possibility of depravity and iniquity, and must sympathise as fully with the bad as with the good. Under penalty, in every case, of ceasing to be truly Absolute, if it fails to take its official all-inclusiveness quite seriously. And yet how can it do this seeing that it has to include also in itself every jest and every jeer, including those at its own constitution? How indeed it would manage to combine all these contradictory attitudes would remain a mystery which it is not likely to reveal to its devotees, and which, fortunately, is not relevant to our argument.[2]

For we have amply proved the simple truth that all these philosophic 'Absolutes' are in fact highly selective.

[1] *Ethics*, Appendix to Bk. I.

[2] It hardly needs to be said that the philosophies which make their ragbag 'Absolutes' all-inclusive by the postulation of a 'somehow' are logically scepticisms, though for emotional or prudential reasons they may disguise themselves as absolutisms. Moreover, when they approach any problem of real knowing (which is rarely enough) the 'somehow' speedily turns into a 'nohow,' and they hasten to throw out again what they have pretended to include. So they form no exception to the rule.

No philosopher has ever succeeded in including literally everything in his synthesis. No one has ever really tried, or even considered to what total inclusion would really commit him. If he had, he would speedily have seen that it meant not a cosmos, but a chaos, or else, in the effort to include everything, would have become as mad as his 'Absolute,' of which he forms one of an indefinite number of 'multiple personalities'. For what reveals the essential futility of trying to represent thought as aiming at all-inclusiveness, is the fact that if *per impossibile* this feat could be achieved, it would only conduct us back to the chaos from which the analysis (which is the primary function of the intellect) has throughout been struggling to redeem us, forcing upon us, moreover, the additional problem of conceiving a 'mind' so unlike our own as to be comfortable and at home in such a chaos. For to human minds, however philosophic, rationality does *in fact* rest upon selection.

Philosophy, then, whatever it may profess, does in fact fall into line with Science and Common Sense. United they petition Logic for a theoretical recognition of Relevance, and of the right of selecting the relevant and rejecting the irrelevant. But will Logic listen to the petition? Not with a good grace. For it is the most conservative of the sciences. But how can any Logic repudiate *de jure* what is *de facto* the universal practice of human minds, without ceasing to be itself relevant to the procedure of our intelligence? So long as it claims to be a theory of human thinking, is it not bound to give a theory of the use of Relevance?

To do so, however, it will have to reform itself extensively. For to admit the notion of Relevance seems impossible without (1) giving up the notion of undiscriminating inclusion as the normal procedure and ideal aim of thought. (2) It will be necessary to study instead the process of *selecting the relevant.* (3) This again can hardly be done without recognising the all-pervasiveness of *choices* in our mental operations, and the volitional character of thinking generally, and distinguishing between 'rational' and 'wilful' choice or mere 'arbitrariness'. (4) The connexion between *Selection* and *Risk* will have to be investigated, and the necessity of taking a risk in making a selection will have to be pitted against the old logical ideal of a 'necessary connexion' which even the greatest fool could not fail to follow. (5) Last, but not least, it will have to be brought under the notice of Logic that *all reasoning ultimately depends on the notion of Relevance.* For in all reasoning about reality we treat 'events' as 'cases' of 'laws'. But the cases are never quite identical, nor are they ever bare exemplifications of the 'law,' nor do they present

it without irrelevant accessories. Symbolically, they are case $a\,1 + \ldots$ and $a\,2 + \ldots$ of the law 'A'. Hence to argue from, and to, them, the law must first be extracted by stripping off their *irrelevant* details. But seeing that the cases are given as different, how can we be sure in advance that the differences are irrelevant?

Now curiously enough the old Logic has in a way confessed as much, though without understanding the operation. Logicians have always thought that reasoning depends on what they call 'universals'. But they do not assert that bare universals are to be found in the phenomenal world: *chez nous*, alas, they occur only in obscure and mutilated forms, immersed and entangled in irrelevant 'matter,' from which they have to be extricated. How this is done, and what are the risks and the rights of the process, they have always neglected to tell us; but it is clear that even their account does *not* in fact dispense with the notion of Relevance.

It would of course carry us too far to dwell on all these points on this occasion. For they mean putting the whole of Logic on an entirely new foundation, which is critically selective, voluntaristic and libertarian, and not undiscriminating, intellectualistic and deterministic. The word 'Relevance' really contains the whole difference of principle between the voluntarist and the intellectualist conceptions of knowledge, and no one can acknowledge it without finding himself driven step by step into complete voluntarism. Conversely, no intellectualism is henceforth consistently tenable until it has wholly purged itself of every suggestion of relevance.[1] But to me not the least remarkable fact about the whole affair is that the practical genius of the British[2] people should have discovered and expressed this all-important conception, merely in the course of dealing concretely with the affairs of life, centuries before any of the logicians, whose profession it was to think upon thought, so much as suspected its existence. The Chosen People of the Practical, that is the Active, Reason, then, have good reason to be grateful, and proud of their mother-tongue; but what of the multitudes of Gentiles whose tongues will not express the notion of Relevance and whose thoughts must consequently fail to grasp it? Will they all have to learn English, in order to understand the nature of Thought?

[1] This, however, might not prove as difficult a task as might be supposed.

[2] For of course the great unknown Scotch thinker, greater than Hume because more constructive, who invented 'Relevance,' must yield a share of the credit to the nations which adopted his word.

II.—REPRESENTATIONAL PRAGMATISM.

By Douglas C. Macintosh.

The purpose of the present paper is to indicate with reference to the problem of truth a point of view which may be regarded as intermediate between traditional intellectualism and current pragmatism. The writer will hope to remain on speaking terms with the intellectualist while acknowledging great indebtedness to the pragmatist.

Any careful and unbiassed analysis of the judgment as it exists in the moment of its creation will find it to consist in an idea—an abstraction from reality—being predicated of some reality. It is not the mere joining of term to term or of idea to idea, for even when one turns about upon his ideas to criticise and judge of them, it is not of the logical idea as such that he judges; he predicates another logical idea of a reality, *viz.*, either a particular or a generalised psychological reality. If it be pointed out that the subject of the judgment —or at least its known content—is made up of a complex unity of data of sense and predicates of former judgments, then practically the whole content of the subject, together with the new predicate, is taken as an idea and predicated of reality; or, it may be, all this is taken as subject and the idea "real" is used as its predicate. This latter course is simply the bringing out explicitly of the existential character belonging to all judgment, and this reversibility of the formally existential judgment is justified by the fact that, generally speaking, reality and all that we can say about reality are, for the guidance of conduct, practically identical.

Now it is probably this characteristic of the existential judgment of recapitulation that has led to the initial assumption of the intellectualist that truth is identity with reality.[1] But since truth is essentially a quality of judgments, that is, of the relation of predicates to subjects, it would follow from

[1] Among recent writers see, for example, R. B. Perry, *Journal of Philosophy*, etc., vol. iv., p. 422, and W. P. Montague, same *Journal*, vol. vi., p. 546. The latter says: "Truth is the relation of identity between the content as believed and the content as existing".

the intellectualist principle that for a judgment to be really true the predicate ought to be quite identical with the subject. In this connexion Bradley at least has the courage of his intellectualist convictions, as one may see from his well-known chapter on "Thought and Reality". But it is this lurking suspicion that the idea ought to be identical with the reality, the predicate with the subject, that gives rise to the most acute of the epistemological difficulties felt by all Simon-pure intellectualists when they think consistently. It is of course readily recognised that the identity of subject and predicate does not hold in the case of the judgments which we actually do make in practical life, and as a compromise adjustment to the discrepancy which *is*, as compared with the identity which *ought to be*, the vaguer terms of the correspondence- or copy-theory of truth are adopted. This view, to which the realist is peculiarly prone, undertakes to measure the degree of a judgment's truth by the accuracy with which the predicate imitates the subject. It is soon recognised, however, that many predicates do not really copy the subject; they are symbols more or less arbitrarily chosen —symbols which have been associated with the thing (as, for example, names), and which structurally form a mere addition to it. Further distinctions ought also to be made, for sometimes the predicate more closely copies some other object than the one of which it is predicated, as in metaphorical judgments, and sometimes the predicate resembles the particular subject no more than it does a great many other possible subjects, all of which may greatly differ among themselves, as is true of the generic predicate. If then the "correspondence" is sometimes generic, sometimes metaphorical, sometimes purely symbolical, and only sometimes —and that imperfectly—imitative, what becomes of truth according to the intellectualist ideal? Manifestly it is not truth that we have at all, even in our most trusted judgments, but at best something somewhat like it, and at worst something not at all like it. If a special effort be made to secure a closer correspondence between subject and predicate, the questions arise: Inasmuch as the predicate is an idea, and ideas are abstractions from reality, must not the idea remain ever not quite identical with the thing? How indeed can any number of fragmentary ideas be equivalent to the thing, which is an undivided unity?[1] But anyway, if we have the thing in our possession in such a way that

[1] *Cf.* A. W. Moore, *Pragmatism and Its Critics*, p. 54. "To be completely true an idea (according to absolutism) . . . must *be* the whole of reality."

we can copy it, why do we need to make a duplicate? Will not the original suffice? Is not the judgment a tautology? Or, if we have not the original, how can we copy it? Must not the judgment remain forever unwarranted?

"But," suggests the subjective or epistemological idealist, "since it is true that we are shut up to ideas, we have no right to suppose that there are any real things which are not ideas. All we have to do, then, is to relate our ideas to each other in an orderly fashion, which is what the judgment really undertakes to do. Coherence, not correspondence is the test of truth." Thus we see a growing vagueness in the view of the relation of ideas to reality, of predicate to subject. As identity gave place to correspondence, so correspondence simmers down to mere coherence, the sticking together in some way of subject and predicate, both being thought of as mere ideas, and the cohesive substance being a compound of the categories, themselves a special sort of ideas. But, even with this second retreat, the intellectualist's peace is short-lived. However many ideas he may have related to each other in his system, he has to acknowledge that his work is incomplete, and that, if a complete, all-inclusive system of ideas were constructed, it might radically differ from his system; and so, abandoning subjective for objective idealism, he is forced by the same act to return to the correspondence view of truth with all its difficulties. In so far as he transcends solipsism he is forced to estimate the truth of his system by its identity with an absolute standard which is always beyond his reach. The coherence of idea with idea may have been obtained, but now the problem is how to secure *adherence* of these ideas to the absolute reality beyond. Consequently, as Bradley says, there is "no truth which is entirely true".[1] Or, to quote Joachim, "the truth is—from the point of view of human intelligence—an Ideal, and an Ideal which can never *as such* or in its completeness be actual in human experience".[2] Nevertheless, it is claimed by Prof. Royce that there *are* accessible absolute truths—truths, that is, to deny which is to reassert them in a new form.[3] But even here the thoroughgoing intellectualist does not ultimately disentangle himself from his dilemma. In the first place these so-called absolute truths, being implications, are all hypothetical, and so their truth, in the intellectualist sense of identity with reality, remains ever suspended by a doubt so long as, in avoiding solipsism by

[1] *Appearance and Reality*, p. 362.
[2] *The Nature of Truth*, p. 79.
[3] *The Problem of Truth in the Light of Recent Discussion*, p. 86.

recognising the incomplete character of his system, the thinker puts absolute reality beyond himself.[1] Judged by the canon of intellectualism, these "absolute truths" are mere ideas, hypotheses, not known truths. We can never *derive* the application from the implication; we have to *make* the application. The way to get from "implies" to "is," is "not by arguing but by trying". And even when we do employ general principles, our axioms are judgments which, according to strict intellectualism, are either tautologous or false. Moreover, in so far as these "absolute truths" in being denied are reasserted *in new form*, for the consistent intellectualist it is not they which are reasserted, but different judgments.

Again, when, as by Prof. Boodin,[2] it is claimed that in so far as our knowledge is concerned with social and ideal structures, it is no longer *of* reality, but it *is* reality, not even here does the intellectualist escape from the necessity of agnosticism. For if B's judgment has for its subject A's whole judgment, then B's judgment, like all other judgments, is to the intellectualist either tautologous or not quite true. And even facts of implication, being general mental facts, are judged about by means of predicates which are themselves, as predicates, not facts but ideas, so that the relation of predicate to subject cannot be one of exact identity. But if B's judgment has for its subject the same reality as was taken as subject of A's judgment, and if B predicates of this same subject exactly the same idea as A predicated, then B's judgment may be said to be identical with A's (except that it is B's rather than A's); but *the identity is not the truth*, for the supposed identity is not, like the relation we call truth, between the subject and the predicate of the judgment; it is between two judgments. All of which shows of course, not the inaccessibility of truth, but the futility of strict intellectualism.

In Mr. Bertrand Russell's theory of truth we have what looks like the last stand of a retreating and practically defeated intellectualism. This author, although disclaiming all ability to find any universal criterion of truth, still ventures to define its nature.[3] But it would seem vain to attempt a definition of that for which there is no criterion; the proximate genus might indeed be given, but not the differentia of the species. Something true about truth might be stated, but not that

[1] Prof. Royce frankly accepts solipsism—the solipsism of the Absolute—thus leaving, in strict logic, only the Absolute Self to know the truth.

[2] "Truth and Agreement," *Psychological Review*, 1909, No. 1.

[3] *Philosophical Essays*, p. 173.

which distinguishes it from falsity. Furthermore, Mr. Russell says that judgment is not a dual but a multiple relation of mind to its various terms or objects.[1] But when he comes to define truth, he not only offers, although in a somewhat covert way, a truth-criterion; he also fails to quite extricate himself from the time-honoured view of truth as a dual relation. "The judgment is true," he says, "when the relation which is one of the objects relates the other objects."[2] This somewhat cryptic expression, when translated into more intelligible phraseology, can only be taken to mean that truth is a relation of mind (or idea) to reality, such that the relation which unites the objects in mind (or idea) is the relation which unites the objects in reality. But this is a return to that view of truth and the judgment which makes them consist in some sort of a dual relation between idea and reality, even if both the idea and the reality are somewhat complex entities. And so all the difficulties of the correspondence theory recur. Nor will it do to measure the truth by the identity of the relation between the mental terms and the relation between the real objects; if the judgment is true, there must be an identity also between the terms related and the objects existing. And in the case of terms and relations both, since there cannot be absolute identity between idea and reality, between predicate and subject, if there is to be any judgment at all, *just how much identity* is necessary for truth? To this question the intellectualist has no answer; he has no real criterion of truth.

Some, to escape the agnostic fate of the intellectualist, take refuge in a form of irrationalism. In reaction from the vain attempt to find knowledge in mere ideas, conceptual predicates apart from any immediately given subject, they go to the opposite extreme of endeavouring to find knowledge in the bare immediacy of the subject, apart from all conceptual predicates. The real value of this reaction is not in its negative but in its positive doctrine; in its insistence upon the necessity of immediacy for perfect knowledge, not in its assertion of the futility of mediation. This is but doing for our own day what was done before when it was pointed out that concepts without intuition are empty. What it needs is the complementary insistence that intuition without concepts is blind. Of course, as Bergson sees, the concept as a substitute for immediacy is an impoverishment of reality, but the concept as an addition to immediacy is an enrichment of reality; just as the

[1] *Philosophical Essays*, pp. 117 ff. [2] *Ibid.*, p. 181.

perception of physical reality is its consummation, not its mutilation. Bergson claims that any true metaphysic must get beyond symbols,[1] but in so far as he states his own metaphysical position, he makes use of concepts. He does valuable work in criticising some of our metaphysical concepts, but in doing so he substitutes for them others which are either more accurate copies of the subject-matter, or else still more highly metaphorical and symbolic. And indeed some of our most valuable knowledge is contained in metaphorical judgments. What we know with is always necessarily somewhat different from what we know, and it is a distinct advantage in many ways to *experience* time as duration and to *think* it in terms of space-concepts. But, in any case, anti-conceptualism violates its own principle in becoming a doctrine; and if we are going to take seriously him who holds it, we must regard him as simply an intellectualist who has become so thoroughly sceptical that he has begun to advocate the giving up of the effort to make a judgment at all. Obviously, his only consistent course would be to cease to speak or even to think, in which case he would become philosophically negligible.

Let it be assumed then once more that, for the knowledge we are here concerned with, subject and predicate are both required. How can we then arrive at judgments which shall be true? Just here it is important to note that intellectualist and anti-conceptualist alike admit the practical value and even necessity of the ideas which we predicate, although they do not deign, of course, to make use of this consideration in discussing the problem of truth. It may very well be, however, that the stone which has been rejected of these would-be builders is to become the headstone of the corner in the temple of truth. This practicality of ideas current pragmatism seizes upon, claiming to find in the function of truth the key both to its criterion and to its essential nature.

A mere recognition of the practical function of our judgments or of truth does not make one a pragmatist, although as Dr. Schiller points out[2] to admit the proposition, "All truth is useful," logically carries with it some of the most characteristic doctrines of pragmatism. Prof. Baldwin,[3] for instance, holds to the purposive character of thought, but he defends the intellectualist criterion of truth as opposed to the pragmatic. No one is a genuine convert to pragmatism unless he proposes to live, intellectually speaking, by

[1] *Revue de Métaphysique et de Morale*, 1903, p. 4.
[2] *Humanism*, p. 38.
[3] *Thought and Things*, vol. ii., ch. xiii.

the principle of measuring truth, however cautiously, by the standard of usefulness. Once safely converted it remains for the pragmatist to show his still doubting intellectualist friends that he is able to recognise just what sort and what degree of usefulness may be taken as a guarantee of truth. Everybody knows that not every sort or every degree of usefulness can be taken as a test of truth, if the notion of truth itself is to retain for us any practical value.

Essential pragmatism, then, does not content itself with saying that all real live judgments which are true are in some sense useful to the person making them, although it would say that with certain qualifications as to the kind of usefulness meant. And yet, on the other hand, the true pragmatist would not go so far as to say that all judgments that happen in particular cases to be useful in leading to the fulfilment of any kind of purpose, or even to the fulfilment of thoroughly worthy ulterior purposes, are true; although one has to admit that Prof. James in his *Pragmatism* declares that when we make new application of a "cold-storage" truth, we "can say of it either that 'it is useful because it is true,' or that 'it is true because it is useful,'" and still more surprisingly adds, "Both of these phrases mean exactly the same thing".[1] The moderate pragmatist, however, can agree with his critic that it must always be the purpose to know the purpose of the investigator, the truth-seeker, fulfilment of which is to constitute verification, and not necessarily the fulfilment of the later developed purpose to make some further use of the truth after it has been obtained.

Is this, then, the capitulation of the pragmatist? By no means. It remains to ask, What sort of purpose is the purpose to know? What makes one a pragmatist is his insistence that as in science, so in philosophy and all truth-seeking, the idea in question should be *used* as a working-hypothesis, and its truth tested by the way in which it works. An idea is constructed to serve, in the guidance of action, as a substitute for an immediate perception; if, when the immediate perception does occur, it prompts to the same action as did the original idea, the idea "agrees" with, or is practically the same as, the perception. The test of truth is thus, as the intellectualist has supposed, some sort of identity between the idea and reality, but the point is that it is *practical* identity, sufficient identity for practical purposes. And the cognitive purpose, as distinguished from the purpose to make use of truth, is

[1] *Pragmatism*, p. 204.

the purpose to obtain or frame an idea which shall prove sufficiently identical with the reality for practical purposes. Or, to put the matter differently, every cognitive purpose is an employee, the right-hand man, as it were, of some practical purpose, and the employee's ultimate satisfaction is in the satisfaction of the employer. Sometimes the employee may modify the demand of the employer, but in general the business of the employee, the cognitive purpose, is to secure an idea which is sufficiently identical with reality to suit the employer, the practical purpose. It is important here for the sake of clearness that we have in mind the difference between the purpose of the original judgment and the purpose of the later statement. The judgment is always relatively sincere; the statement, as we know, need not be. It is what the reporter *takes* as true when collecting his materials that we are concerned with here, and not with what he *gives* as true to the readers of the daily paper. Understanding the term "practical" in this sense, then, it remains that the mark of truth is the practical identity of the idea with the reality, of the subject with the predicate. And so at the very heart of essential pragmatism we have found representationalism, the element of truth in intellectualism. It is not, however, a representationalism which contradicts pragmatism, but one which supplements the pragmatic criterion at the same time that it is supplemented by that criterion itself.

But sometimes the verifying perception is either temporarily or permanently unattainable, or else not important enough to be sought at the expense of something else. Does this necessarily mean the total cessation of belief, the total absence of knowledge? Not according to everyday life, not according to science, and not according to pragmatism. It often occurs that acting upon the idea continues to work so uniformly well in connexion with its most intimately associated practical purposes, that even in the absence of the immediately verifying perception, the idea is kept in action, that is, we believe it to be true, we are *practically* certain that the idea is *practically* identical with reality.

The justification of this is that the race has needed to postulate, and through long experience has acquired the inveterate habit of postulating, that nature is dependable. So far, pragmatism is simply the logical theory of everyday scientific procedure. But what would make pragmatism practically significant would be the further extension of the pragmatic criterion, under whatever limitations might prove necessary, to certain ontological judgments which have important prac-

tical bearings on human life, but with regard to which complete perceptual verification is out of the question. In other words, can the pragmatic criterion be legitimately applied in a philosophy which deals with ultimate problems? Here the question is whether not nature simply, but man's moral nature, is dependable. Manifestly not every warning thought or encouraging faith that any individual may find temporarily useful for the strengthening of his moral resolution can forthwith be declared true. But the question is whether the postulates which morality—not any grade of morality, but the highest morality—finds not in mere first impressions but as a result of the most critical examination, that it not merely is able to use but absolutely needs in order to maintain itself —whether such postulates, in the absence of the possibility of perceptual verification, can be legitimately regarded as at least more trustworthy than their contradictories. This is undoubtedly the most vital issue in connexion with pragmatism. It is not our purpose here, however, to develop or to defend the postulates of an ethico-religious pragmatism. Suffice it to remark that while such a pragmatism, loosely interpreted, may indeed become justly odious to the conscientious scientist, if critically applied it may supplement in a most welcome manner the deficiencies of the ordinary scientific world-view.

But current pragmatism, besides being often inexcusably careless in the application of the pragmatic criterion, has gone so far in its enthusiasm as to overstate its principle and thereby to destroy in large measure the value of its achievements. Not content with deriving the criterion of truth from its function, it has hastened to identify the nature of truth with its criterion. Truth has been equated with verification, and verification with consequences that are good.[1] Although Prof. James calls this the "wider pragmatism," he has himself said that truth is a process, something which happens to an idea.[2] Dr. Schiller's statement is that "'truth' *means* successful operation on reality".[3] Prof. Dewey agrees with Prof. James that truth denotes specific verifications,[4] success resulting from the use of an idea,[5] and Dr. Bawden insists that if truth be one thing and the practical consequences a wholly different thing, then pragmatism is not true.[6] The pragmatic refutation of this

[1] *Cf.* James, *The Meaning of Truth*, p. 52.
[2] *Pragmatism*, p. 201. [3] *Studies in Humanism*, p. 118.
[4] *The Influence of Darwin on Philosophy and Other Essays*, pp. 109, 139.
[5] *Journal of Philosophy*, iv., 202. *Cf. Influence of Darwin*, etc., p. 143.
[6] *The Principles of Pragmatism*, p. 203.

procedure is that it so confuses the idea of truth as to make it of very little service.[1] The way in which the fallacy of this hyper-pragmatism[2] parallels that of utilitarianism has been repeatedly pointed out.[3] The definition of true judgments simply in terms of practical utility fails to safeguard the element of value in the intellectualist conception. It gives, although in a too general way, the differentia of the species, *viz.* usefulness; but it does not bring out sufficiently, if at all, the proximate genus, *viz.* representation.

This defect of extreme pragmatism it is the aim of representational pragmatism to remedy. In our attempt to state the pragmatic criterion we found that we had to make use of the intellectualist's favourite idea of identity, though interpreting it in a functional way. Similarly in attempting to define truth in terms of representation, one can succeed only by recognising the pragmatic criterion. In undertaking this definition one has to take account of the fact that representation belongs to meanings outside of explicit judgments, as well as existing in judgments which claim to be true. What is the specific difference belonging to the representation found in true judgments? The functional analysis of meaning shows it to be representation which *can* mediate purpose. Or, stated the other way about, meaning is essentially mediation; what an idea means, *ultimately*, is what it is a means to; *proximately* it is the means itself, *viz.*, representative material, proxy experience. Thus, as was noted by Pierce, the grandfather of pragmatism, the purposes which the idea can mediate form the key to the meaning of the idea. But he ought to have gone farther and applied this key, the meaning of meaning, to unlock the door to the meaning of truth, and not to have been frightened by the bogey of a pseudo-pragmatism. Meaning, then, is representation which can mediate purpose; but in the case of every live judgment some possible purpose has become actual, and in that judgment some meaning is actually employed to accomplish that purpose. *What is taken as truth*, then, *is representation* (of subject by predicate, of reality by idea) *sufficient to mediate satis-*

[1] Mr. J. W. Snellman in MIND, April, 1911, rightly maintains that "the intellectualist 'meaning' of truth becomes unverifiable if it is deprived of its pragmatic criterion," but goes to the opposite extreme when he asserts that "the meaning of truth . . . is indistinguishable from its test".

[2] Paulhan uses the term "hyper-pragmatism" (*Révue Philosophique*, vol. 67, pp. 614 ff.), but in a different sense from that in which it is used here.

[3] See, for example, G. A. Tawney, "Utilitarian Epistemology," *Journal of Philosophy*, i., 337 ff., and T. De Laguna, *Dogmatism and Evolution*, 104 ff.

factorily the purpose with which the judgment is made.[1] *What is really true, however, is representation sufficient to mediate satisfactorily whatever purpose or purposes ought to be recognised in making the judgment.* In other words, real truth is practical identity of idea with reality, of predicate with subject, where the *practice* in question is ultimately satisfactory, as well as the mental instrument which serves it. Thus representational pragmatism is truer to the intellectualist ideal than intellectualism itself is able to be. So long as the subject is taken as an idea like the predicate, the equating of subjects and predicate is impossible in any judgment which conveys any meaning. Indeed even from the practical point of view two ideas cannot be identified save as both are predicated of the same reality, with no practical difference in the consequences. But when the subject is taken as a reality, although on intellectualist grounds it becomes even more hopeless to try to identify subject and predicate, on grounds of representational pragmatism the problem is readily solved. The relation of predicate to subject is that of *functional equivalence* in the control of the action required. The judgment is true when the idea will do practically as well at least as further experience of the thing in stimulating and controlling action in adjustment to that thing.

Here we have, then, in contrast with current pragmatism, a view which explicitly recognises the ideal element in truth. The practical failure of ordinary pragmatism at this point has given basis for the charge that it leads to sordid utilitarianism. Truth is to be measured—so our view will have it —not simply by the idea's working "in the way it sets out

[1] An approach to this position is briefly indicated in the following sentences from E. D. Fawcett's *The Individual and Reality* (p. 38): "Often the agreement (of propositions with outward fact) may seem inconsiderable, nay, trifling; but provided that such agreement forwards a purpose, the proposition or arrangement or propositions is sufficiently true. Truth means propositions which, in view of our ends, can be taken as, and substituted for, the appearances with which they agree." Mr. Oliver C. Quick, in a recent article in MIND (April, 1910), endorses the pragmatic criterion, while rejecting the current pragmatic definition of truth. He himself, however, leaves truth undefined. This is in almost complete antithesis to the position of Mr. Bertrand Russell, who, as we have seen, claims to define the nature of truth while regarding it as having no criterion that can be stated in universal terms. Prof. Pratt endorses the pragmatic test of truth, but reverts to a definition of truth which sacrifices clearness to simplicity. "Truth means," he says, "that the object of which one is thinking is as one thinks it" (*What is Pragmatism?* p. 67). Pragmatically interpreted, this definition will serve; but intellectualistically interpreted, as it is evidently intended to be, it is involved in all the old epistemological difficulties.

to work,"[1] but also by the way in which it does set out to work. Ends, and not simply the adjustment of means to ends, come in for critical examination. The moral quality of the purpose is often reflected in the judgment itself, and learning the truth becomes—in its higher reaches, almost always, it would seem—a *moral* achievement.

But while recognising the ideal character of truth, representational pragmatism makes this ideal of truth essentially human. It substitutes for the insoluble, artificial problems of modern epistemology the soluble, real problems of the psychology and logic of the processes of knowledge. In so far as any judgment falls short of ideal truth, the norms are at hand by which it can be corrected. Even telling "the whole truth," whenever it is a moral duty, becomes at the same time a real possibility; it is telling what is *practically* the whole truth so far as all purposes which ought to be recognised are concerned. Truthfulness consists in the habitual care to make one's statement always approximate one's own judgment sufficiently for whatever purposes ought to be recognised in each particular situation.[2]

If it be asked whether there is not a superhuman truth, the answer is, Doubtless there may be, but what is generally

[1] See Dewey, *The Influence of Darwin on Philosophy*, etc., p. 150; Moore, *Pragmatism and Its Critics*, p. 87; Bawden, *The Principles of Pragmatism*, p. 119; Schiller, *Riddles of the Sphinx* (1910), p. 133.

[2] The criterion of "the purposes which ought to be recognised" in turn is ultimately to be stated in terms of human welfare, interpreted from a point of view in which the distinctly spiritual interests are duly dominant. There may be degrees of approximation to the truth and degrees of verification of the truth, but, given the purposes which ought to be recognised, the judgment which represents reality sufficiently for these purposes is true. Mathematically-worked-out laws, as in physics and astronomy, are only hypothetically truths, except in so far as they have been verified. Many of them have been sufficiently verified empirically for practical purposes, and so may be taken as practically true of the actual world. If by more critical tests they should be verified more completely, this would not make them any truer than they were. If by means of these more critical tests a discrepancy should be found between the mathematically deduced law and the actual fact, then for the purposes which dominated these tests the supposed law is not true. If these are purposes which ought to be recognised by humanity, then the more accurate empirical observation must be regarded as the truth, and not the mathematical anticipation. If, however, there is no valid human reason for recognising such hyper-critical purposes, there is practically no difference between the two expressions; the one statement is as true, practically, as the other. Given no change in the purposes to be served, there are no degrees of truth; either the judgment is true, or it is not true. What is untrue cannot become true, nor what is true become untrue—*unless* there comes to be a change in the purposes which ought to be recognised in making the judgment, and not necessarily even then.

meant by absolute truth, or truth as it is for the Absolute, is simply a regulative idea. If absolute truth be defined, with Schiller, simply as "truth adequate to every human purpose,"[1] we are furnished with an accessible standard, and in this sense Prof. Royce's contention that we are in possession of absolutely true propositions[2] may be readily granted. But when the absolutist assumes that there must of necessity actually be an eternally existent sum-total of all possible true judgments, he indulges in speculative dogmatism. Superhuman truth, if we are going to speak of it at all, we had better call divine rather than absolute, for in the whirligig of the history of philosophy it has again become less ambiguous to speak of God than of the Absolute. And if we are going to speak of God's truth, there is no manifestly valid reason, from the religious side at least, why it should not be regarded as essentially similar to man's, *viz.* not a timeless, changeless, purposeless, absolutely complete representation of an eternally-complete reality, but representation, the content of which may vary from time to time, and yet which is sufficient always to satisfactorily mediate whatever purposes God may have in view. God may be more anthroponoetic than we think. Religion's only essential postulate here is that all reality be thought of as representable, and actually represented in so far as is necessary for the purposes of God.

One of the most important of the implications of representational pragmatism is that by which it enables one to take a more conservative attitude toward the question of the permanence of truth than obtains in current pragmatism. And yet even pragmatism as it is and has been, has often shown unnecessary haste in concluding that it must, to be consistent, maintain that all truths are of but temporary validity. It would be more in keeping with the supposedly empirical temper of pragmatism to wait for any particular judgment to be refuted, instead of dogmatically assuming beforehand that it is certain to be outgrown. But representational pragmatism can go farther in defending the permanence of truth. Every honest judgment intends to be of permanent validity, and if at any later time it is seen to need revision, this is commonly to be explained either as due to the fact that the purposes active in the original judgment were deficient with reference to the situation, including often a lack of will or ability for mental thoroughness, or else as due to the former insufficient accessibility of the reality judged about, in both of which cases the earlier judgment

[1] *Studies in Humanism*, p. 213. [2] *Op. cit.*, p. 84.

was not really true, but only seemed to be The geocentric hypothesis in astronomy is a case in point; we regard it not as a superseded truth, but as a former theory which never was in reality true. If any judgment is really true, the presumption is in favour of its predicate always remaining the idea which will represent the reality sufficiently for all purposes which ought to be recognised in making the judgment. That many of our judgments in practical life are of this character no one really doubts. Nor need we say with Prof. Royce that such truths are accessible only in the realm of our knowledge of the forms that predetermine all of our concrete activities.[1] If that were so, we could have no real or permanent truth about anything which we are practically concerned to know. The representational pragmatist can claim not merely hypothetical judgments but many categorical judgments—judgments of historical fact, for example—as permanently true; the hard and fast intellectualist, as we saw, is not logically entitled to claim even that much. If a later judgment differs from an earlier one because the purposes which *ought* to be recognised have changed, then, even if there should be a formal contradiction between the two judgments, the contradiction is not real. The new truth is not the old truth, but the old truth is still the judgment which, sufficiently for all purposes which ought to have been recognised in making it, represented the reality, and which, with reference to that earlier situation and the rightful purposes controlling it, still sufficiently represents the reality. For example, for the purposes which ought ordinarily to be recognised the carrying out of the value of π to a few decimal places gives a practically true judgment; but in some situations a more extended determination is required, so that the earlier judgment is not true in these later situations, just as, in the earlier situations, the later judgment would have contained irrelevant representation in addition to the truth. The contradiction between the two judgments, therefore, when each is viewed *in situ*, is easily seen to be merely formal and not real. Moreover, representations of reality sufficient for all practical purposes are not to be rejected as untrue simply because of the possibility of making the representation closer, should there arise any occasion for doing so. Thus the representational pragmatist, while he shares the advantage which current pragmatism has over intellectualism in possessing a usable criterion of truth, is able to say with as much confidence as the most intellectual-

[1] *Op. cit.*, p. 90.

istic absolutist, "Once true, always true"; although, because of a change in the "ought," old truths may come to be superseded and be no longer used.

Our conclusion then is that while the traditional intellectualism gives the proximate genus of truth (representation of reality) but not its specific difference (sufficiency for all proper practical purposes), and while current pragmatism rightly insists upon the latter, but wrongly ignores the former, an adequate definition of truth must combine the partial truths of both positions.

III.—THE ETHICAL SIGNIFICANCE OF THE IDEA THEORY—(II.).[1]

By R. M. MacIver.

We have seen how Plato, taking his stand on the principle that philosophy — being explanation, an answer to the question "Why?"—is the search for final cause, ultimately for *the* final cause, was led to his Idea of the Good. For the Good is the objective existence of the final cause, and Plato must therefore find all reality within it. We have seen further how the method he adopted was in itself logical or scientific, the search for the One in the Many, involving the faith that the question "Why?" is ultimately answerable, and that to know the real is also to know the Good. His earlier thought was thus dominated by the attempt to co-ordinate the results of the logical method with the intuitions of an ethical mind.

The result is the Platonic system as developed in the *Phædo* and the *Republic*. Here a seemingly complete system (only seemingly, for the two constituents of the Idea world, mathematical objects and ethical universals, remain distinctly heterogeneous) is attained by means of such a co-ordination, whose ultimate expression is the Idea of Good. This system, in a word, identifying the real and the abiding and the rational, identifies therefore the real and the Good. It follows that the phenomenal, the sensible, and the evil are classed together as unreal. By this short method the universal supremacy of the final cause, the all-comprehending reality of the Idea or nature of Good, is established.

It seems pretty clear that we can call the system so constructed "Megarian," for it is essentially based on the doctrine that Oneness and Goodness, the world regarded as scientific system and the world as the manifestation of purpose, are identical, this in turn being a consistent development of the original Socratic doctrine that virtue was

[1] Pt. I. appeared in Mind, vol. xviii., N.S., No. 72.

knowledge. Plato, as we have insisted, was interested not so much in inventing a metaphysical system as in "explaining" the world by means of such a system. To this end he adopted freely all the conceptions of his predecessors and contemporaries which seemed to him fruitful, all that he could find suitable for his purpose in the Pythagoreans, Heraclitus, Parmenides, Socrates, and even Euclides. And he certainly did not invent his "way of Ideas". It is necessary to recognise this fact in order to understand the unity of Platonic thought under the changes of its development. The thought of Plato is both relative to his time,—we can no more understand it apart from the thought of his age than we can, say, understand Mr. Schiller (so far as we do understand him) without knowing the position of Mr. Bradley—and also transcends it. The conceptions he is working with are those of his time, but throughout there is the Platonic spirit, in its richness and earnestness, informing and translating those conceptions.

We may go on therefore to divide for our purpose the later dialogues into two classes, (1) dialogues of criticism, the *Theætetus*, and the *Parmenides*, (2) dialogues of reconstruction, the *Sophist*, *Statesman*, *Philebus*, *Timæus*, and possibly the *Laws*. The criticism is essentially criticism of the Megarian position. Both the *Theætetus* and the *Parmenides* are definitely associated with Megarian thought. The conversation reported in the *Theætetus* is supposed to be a record made by Euclides himself and is read at Megara in the house of Euclides. The *Parmenides* again, one of the most remarkable works of criticism ever written, is clearly an examination of the Megarian or Neo-Eleatic "One,"—though in calling the doctrine criticised in that dialogue "Megarian" we must not forget that it is also the doctrine which made the construction of the *Republic* possible.

(1) Again, it must be maintained that the primary end of these dialogues, as of the earlier, is ethical. Schaarschmidt was essentially right in making the presence of ethical purpose a test of authenticity for the Platonic writings, but instead therefore of doubting the more "dialectical" dialogues he should have found under the dialectic the living thought of Plato. Even in so "dialectical" a piece of work as the *Parmenides* there is present, not obscurely nor as a doubtful inference, but clearly expressed, the acknowledgment of an ethical end. The exercise is undertaken because without it we cannot "define the beautiful, the just, the good, and the Ideas generally" (135 C). The *Theætetus* also, seemingly the

most sceptical of all the dialogues, can be understood only in the light of its ethical purpose. What, we must ask, is the common bond of the three theories that Socrates masses together in such a seemingly arbitrary way, the theories of the Flux, of Man as Measure, and of Knowledge as Sensation? Simply their common ethical consequence. And the "turning-point of the whole dialogue," as Campbell[1] saw, depends on the conception of the good. Because Protagoras must not count goodness at least in the number of merely relative things, he is driven to divorce goodness and truth. "Those thoughts which the inexperienced call true, I maintain to be only better, and not truer than others" (*Theæt.*, 167 B). Therein consists his true antagonism to Plato and to Plato's ideal. Behind all Plato's thought there is an unassailable belief in the relation between knowledge and good, and in the *Theætetus* the good is sought for under its aspect of the true. But that dialogue only reveals a difficulty in the account hitherto given of that relationship. If Protagoras is wrong, is the contrary of Protagorean doctrines right? Is sense-perception nothing? Does it offer *no* reality? Must we not say "we know what we see and hear" (163 C), the letters we see as much as the meaning we understand, must we not admit that perceptual knowledge is not knowledge only because it is not all knowledge (*cf.* 206)? It is not adequately realised that what endangers the absolute distinction between knowledge and opinion and the system resting thereon is the new importance which Plato is here forced to give to the world of sense. The *Theætetus*, analysing the subjective as the *Parmenides* analyses the objective side of the correspondence, makes a searching and unsuccessful attempt to find a mark of distinction between the faculties of opinion and knowledge, to find a difference of kind that will distinguish right opinion from the knowledge it was supposed merely to imitate. Does not the very phrase "right opinion" involve the inference that here too in opinion there is knowledge itself? "Right opinion implies the perception of differences" (209 D). And would not the Socrates of the *Republic* have shared the disappointment of the Socrates of the *Theætetus* at the breakdown of the attempted distinction between the two, and the consequent breakdown of "the most promising of all the definitions of knowledge" (209 E)? Just as perception itself is now seen (186 D) to involve a thought-element (not recognised, *Rep.*, 523), so must opinion itself involve knowledge. The absolute identifications and distinctions of the *Republic*, the conse-

[1] Introduction to his edition of the *Theætetus*, p. xxxvi.

quences of that first daring identification of the Good and the One, are in process of modification.[1]

As a result, the problem of error and above all the problem of evil take a new form and offer a new difficulty. Their reality, which was cancelled with the reality of the sense world, can no longer be denied. The problem of falsehood becomes insistent, and the solution is no longer ready to hand—the only positive suggestion is that the responsibility lies with the mind, no longer with the object (*cf.* 188 *sqq.*). The problem of evil is also affected. If evil is real, evil too is object of knowledge. The roads of Science and Ethics no longer coincide. To know is no longer simply to know the good, but rather to know good and evil as they are, for what they are. Philosophy becomes the "investigation of very Justice *and* Injustice,[2] in their own nature, and in their difference from one another and from all other things" (175 C). For "two patterns stand in the world, the divine pattern that is most blessed, and the godless that is most wretched" (*παραδειγμάτων ἐν τῷ ὄντι ἑστώτων, τοῦ μὲν θείου εὐδαιμονεστάτου, τοῦ δὲ ἀθέου ἀθλιωτάτου*, 176 E). The evil pattern is no longer appearance; the terms employed imply both fixity (*ἑστώτων*) and reality (*ἐν τῷ ὄντι*), and Socrates expressly declares that this evil can never pass away from our "mortal nature". It is no longer simply "phenomenal" and accidental, but real with the reality of the rest of the universe. Because there is a real nature of evil in the world, there is a real nature of evil in the soul, if the correspondence of object and subject is to hold. For desire requires affinity, and the desire of evil is the desire of an evil soul. So the unity of the world is breaking into dualism at its very heart.

The *Parmenides*[3] analyses the objective side of the primary identification of the Good and the One and the Real and the Knowable. Plato had seemed with his fellow-disciple Euclides to make Unity the extensive and Good the intensive aspects of the same single reality. There was thus a gulf fixed between the multiplicity that must belong to the sense-world and the unity that belongs to the world of thought, and phenomena were a shaky bridge between the two, a bridge of which one end was securely fixed in the abiding reality

[1] Thus *τὸ δοξαστόν* can no longer be identified with *τὸ αἰσθητόν*. The doctrine of relativity, as applied to *δόξα*, is subversive; as applied to *αἴσθησις*, it may even be true.

[2] We do hear of an Idea of injustice in the *Republic* (*cf.*, *e.g.*, 476 A), but the admission has no effect upon the system.

[3] I must here acknowledge my indebtedness to Prof. A. E. Taylor's penetrating analysis of the *Parmenides* in MIND, N.S., Nos. 19-21, though my interpretation, as summarised above, differs in some respects from his.

while the other passed over to nothingness. It is this aspect of the Idea doctrine that Parmenides attacks. He insists that, so understood, the multiplicity of the sense-world can never be related to the unity of the thought-world. There is no way of connexion between the two, no bridge at all. Yet the sense-world exists, for we perceive it, and the Idea-world exists, for "whither will you turn if the Ideas are unknown"? Parmenides' own method of criticism, no less than the failure of Socrates to answer him, shows the need for the succeeding analysis. For if Socrates has overlooked one side of the relation, Parmenides has overlooked the other. Parmenides' own historical theory involves the same confusion. "All is One" might mean simply that the universe is a unity, but the arguments of Parmenides and more particularly of Zeno are not relevant to such a unity but just to what Plato would call the Idea of One, the nature Oneness. This Idea or thought-nature Parmenides nevertheless treats as if it were a sense-nature, and he proceeds to refute multiplicity on that assumption. In the present dialogue he is represented as attacking the theory of Ideas on the same assumption. Because the Idea, in its relation to particulars, is like neither a sail that covers a number of men at once nor a day that is one and the same at once in many places, the Idea stands condemned. But the reason why this attack is not regarded by Plato (though it seemed to satisfy his opponents) as fatal is that he sees the weakness of Parmenides' own position. His own argument can be turned round against himself. It implies the existence in some wise of those very Ideas he is assailing. "The dualism of the Ideal and the Sensible" tells against Parmenides as much as against Socrates, against the opponents of Plato as much as against Plato himself.

The way out is therefore not to be found in giving up Ideas, but in showing how these thought-natures interpenetrate to the uttermost recesses of sense, to "things like hair and mud and dirt and anything else that is most paltry and of no account" (*Parm.*, 130). Plato must show that the despised sense-world is through and through ideal. This is the logical conclusion of the whole argument, hitherto unrealised, hitherto obscured by the predominant interest of the ethical Ideas. Plato must now face all the problems of the new situation, with its essential difficulty that it seems to make evil no less than good a constituent of reality. So he undertakes that "roundabout progress through all things" (*ταύτης τῆς διὰ πάντων διεξόδου τε καὶ πλάνης*, 136 E), of which the *Parmenides* is an essential part.

The immediate problem is just the question of the nature of unity and its relation to the nature of multiplicity. That the One is found in the Many is no doubt the basis of the whole system and indeed of every system, but we have by no means disposed of the Many when we have found its One. For the Many are not isolated particulars, or otherwise they could never guide us to the One. Their diversity no less than their unity must be real for thought. Multiplicity cannot belong to the sense-world alone, nor unity to the thought-world alone. We may see ultimately that instead of being divided off into two alien worlds they are so closely interrelated as to be only two sides of the same thought-nature, and Oneness itself just one characteristic, one element or fact in the constitution of that universe which there is for thought to apprehend.

Consider, says Plato, the consequences that must follow if we admit or deny the existence *in the Idea-world*,[1] *i.e.* as objects for thought, of the One and the Many. Let us try to admit one without the other, and consider the consequences for both. Let us consider if it is logically possible to break up existence into two opposed worlds, if it is not logically necessary to remove that opposition. The whole of the intricate analysis which follows (137-166) is devoted to this problem, and the solution, though not expressly stated, is, I think, clear. As however I cannot enter here into details of analysis, I must state my account of that solution rather dogmatically.

When Plato and Euclides[2] identified the One with the

[1] I take τἄλλα to be the other Ideas—the whole discussion is relative to the Idea-world (*cf.* 135 E)—and not the particulars of sense. We may, if we like, speak of τἄλλα as the Idea of diversity, having in view the relativity presently to be discovered in the Idea-world. Plato is facing the problem of Unity and Multiplicity at the only place where it really presents a problem. So again I take the One here to be not directly *the* Idea, but a particularly significant Idea for the present purpose; the Idea or nature of Oneness. The real problem is no longer, I believe, "how the one Idea could spread itself out, so to speak, over a plurality of particulars" (Prof. Taylor in MIND, vol. vi., p. 38). Once a plurality of Ideas has been admitted, is not that question subordinate to and dependent on the question how the idea of Oneness is related to the other Ideas? Once plurality of Ideas is admitted, the particular is no longer the particular of one Idea, related simply as the many instances are to the one type, or the many species to the one genus. Rather the particular *in so far as it is understood* is known as a manifestation of a certain union of Ideas or essential natures. And the only problem here arising, the problem discussed in the *Philebus* and the *Timæus*, must concern the medium or process of manifestation.

[2] It may be objected that Plato never expresses the extreme doctrine of Euclides, that in the *Republic*, *e.g.*, he admits degrees of reality. But

Good and with the All, they necessarily left all multiplicity outside of the world as it is truly apprehended in thought. The difficulties of so extreme a cleavage were beginning to appear in the *Republic;* we are now to see that it leads to the very annihilation of thought. Suppose, runs the first hypothesis of the *Parmenides*, that the nature of Oneness is all, suppose that, as Parmenides seemed to hold, there is nothing in the universe but the form or nature of Oneness, then even that nature cannot exist. To apply any possible attribute to it would be to attribute the multiplicity which *ex hypothesi* is absent, so that finally we must deny its own existence. "If the One is, it is nothing." Suppose, on the other hand, you assert—this is the second hypothesis—not that the whole is identical with the nature Oneness, but, what was really meant in that false assertion, that it partakes in Oneness, or that the One is real. From this starting-point we can arrive at the positive principle that multiplicity is involved essentially in unity, and that the nature of Oneness, if it exist, cannot exist alone. The barrenness as well as the richness of each single Idea is here revealed. That Idea alone tells us nothing of the reality of the world: we can deduce from it only its proper scheme of relations, the system of numbers (144), and that whole scheme at once implies and is meaningless apart from the other Ideas (*τἄλλα τοῦ ἑνος*). Not only is unity restored on this hypothesis, but so is the whole world of the other essential natures. And the conclusion is that Oneness—and likewise any other Idea that may in any aspect claim to be the unity of the world—both must exist and cannot exist alone, but only in diversity. So "it has both name and expression, and it is named and expressed, and everything of this kind that appertains to the other appertains also to the One" (155 E). The same conclusion is confirmed by the remaining hypotheses, which look either to the presence of the Many or to the absence of the One. It may seem a thin and abstract result, the fit conclusion of a rarefied dialectic. In reality, it is Plato's way of asserting, in the infancy of logic, a growing conviction of deep importance. Presently we find him asserting the reality of "not-being" (162 A). This is no sophism, but a discovery which shook the whole system of ethics he had built. If the One is dethroned from its place of unique reality, what of the Good that is identified with the One?

the degrees are due to the mixing of the real with the *μὴ ὄν*, which in the *Republic* is simply nothingness. The *Republic* and the *Timæus* form an interesting contrast in this respect.

It is very important for the understanding of Plato to recognise his growing insistence on the "being of not-being," in other words, on the relativity and therefore interdependence of the Ideas. A recognition of this fact must in especial remove a false conception of the "substantiality" of the Ideas. Down to the present day, critics have, like his own *dramatis persona* Parmenides and like his disciple Aristotle, looked upon Plato's Ideas as if they were some kind of *material* substances, or rather have imported into them just that part of the conception of material substance which our knowledge of matter itself least justifies.[1] In reality the argument can be turned against these critics just as it is turned here against the Eleatic. Plato, unlike Aristotle, is far from regarding arguments like that of the "third man" as fatal, and rightly so, because such arguments only apply to the metaphors, necessarily physical and therefore misleading, by means of which he had described the Ideas. The question is not whether, but how, the objects of our thought exist. If we do not admit their reality, then "what shall we do about philosophy?" But if mind and being are so related that being is what mind knows and mind is what knows being, —a position Plato never gave up and which perhaps no philosophy can without contradiction give up—then the "what" of concepts,[2] being essential knowledge, must constitute essential being. In knowing them we know that they are more than a state of knowing, that either knowledge itself is vain and illusive, or these Ideas are the constituents of reality. It was no alternative to urge, as Aristotle[3] did, "immanence" against "transcendence". It is no solution to say that the Idea is immanent, for it is ultimately a question of what we are to understand by immanence. Thus to call sense-attributes, white, hot, etc., immanent might seem an explanation of the common at-

[1] Even so sympathetic a writer as Gomperz speaks of Plato's "peculiar proneness to objectifying concepts". Unless objectifying means materialising, why should that constitute a difficulty?

[2] *Cf.* Bonitz, *Plat. Stud.*, 194: "Unter Ideenlehre verstehe ich die für die Platonische Philosophie charakteristische Lehre, dass das Was des logischen Begriffes as solches selbständige Realität hat".

[3] Aristotle is really engaged on a subordinate question. Plato's problem is not simply the problem of predication. Aristotle's is. When, for instance, Aristotle in the *Categories* distinguishes ἐν ὑποκειμένῳ from καθ' ὑποκειμένου he does not touch the question at issue here. Plato discusses the logical question in the *Sophist*, and in the main solves it, by a system of categories, but he does not rest there.

It may not be going too far to agree with critics like Zeller and Natorp that the great disciple did not understand the great master, even in matters where his discipleship is to us most plain.

tribution, because here the metaphor, *for it is nothing more*, being physical is more easily applicable to the physical object; but what of the common attributes of non-physical objects; still more, what of attributes common to physical and non-physical, such as unity itself, where the metaphor of immanence ceases even to look like an explanation? Yet the attribute is not "in our heads". How shall we understand it as applying to, as forming part of, the constitution of the world? This was the deeply metaphysical question which Plato raised and which so few of his critics have understood.

By his insistence in the *Parmenides* and later dialogues on the relativity or interdependence of the Ideas, Plato has already taken the first step towards an explanation of how the Ideas exist.[1] The ideas must now extend themselves into an infinite system, and the shores of the unknowable recede to the ἄπειρον itself. In the process, since it appears that their interrelationship is itself a part of their reality, and they tend to become simply aspects or lines of a universal nature or constitution of things, the Ideas lose something of their rigidity and definiteness in the unity of that scheme. But the interrelation and interpenetration of the Ideas in no sense, unless we think in crude metaphors, takes away from their real nature as constituents of the universe. They are no less real than they were, but their reality is understood in a new way. They are not independent, but interdependent.

A new unity has thus been found for the Idea-world—and this is the significant point for our argument. In seeking the unity that would satisfy the philosopher Plato has found only the unity that would satisfy the scientist. It is becoming more and more clear that only one part of the initial philosophic faith can be fulfilled. If the One is good yet Goodness is no longer the reverse side of Unity, and the binding power of the Ideas must be found in their coherence as system, not as purpose. There exists no longer the clear confidence that everything can be "explained," or seen in the light of the good, for the light of the good no longer penetrates all reality. To the necessary extension of reality

[1] They exist as a system or constitution of reality. It at once appears that the opposition of immanence and transcendence must be false. For instance, if the nature of whiteness only exists in white objects, yet it is neither distributed among nor summed up in that aggregate. Though all the particular white objects should pass away there is left a universe in which the nature of whiteness is or was possible, having been actual. That this relation entered into the total scheme of relations in which we know the objective world remains an essential fact in regard to that world.

which the *Parmenides* has revealed, of the two aspects of the primary Idea, its oneness and its goodness, only the former continues adequate. Hence there begins the divorce of those two natures. A third mysterious nature thrusts itself between them. The *Parmenides* thus reveals a breaking Idealism, but assuredly not because Plato is losing his belief in Ideas.

(2) In the *Theætetus* and the *Parmenides* the argument is ostensibly critical, and we now turn to the dialogues which render explicit the result of that criticism in a series of attempts to reconstruct the system whose insufficiency stood revealed. "Not being," that phantom whose phantom-nature was so convenient for the philosopher of the *Republic*, has turned out to be only too substantial. Its true character as now revealed fits but ill into an absolute teleology. It brings with it endless perplexities (*cf. Soph.*, 245 E). If "not-being" is real, sense and multiplicity and error and evil demand their place in reality. "We shall find as the result of all, that the nature of being is quite as difficult to apprehend as that of not-being" (*Soph.*, 246 A). Plato like his philosophers of the *Republic* must descend from the contemplation of the sunlit universals, from his constant "converse with the Idea of being" (*cf. Soph.*, 254 A), down to the darkness of the underworld, for there too among the shadows being is, though more difficult to discern. He must try to read "the long and far from easy syllables of facts" (*Stat.*, 278 D). Plato in fact is now coming to grapple with the essential difficulties of a teleological system, and abandoning the all-comprehensive and therefore self-contradictory teleology of the *Republic* is led to the view that there is in the world something not fully subordinated or obedient to the designing thought. Reality is both more and less than it had formerly appeared. The essential natures are still essential, but they cannot exist apart from motion and change and sense "in awful unmeaningness an everlasting fixture" (*Soph.*, 249 A). The universe has become more complex for Plato than either the materialist or the idealist admits it to be. The philosopher, with all his reverence for the Ideas, cannot possibly accept them as sole reality, apart from the changing world. "As children say entreatingly 'give us both,' so he will include both the movable and immovable in his definition of being and all" (*Soph.*, 249 D). For it is manifest that our life itself is steeped in this anomalous phenomenal nature, which is no longer an alien element out of which it can be lifted entire and so made pure. Therefore our knowledge defeats itself in its search for purity. The passage in the *Philebus* where

Socrates—forgetting the principles of the *Phædo*—admits, "like a doorkeeper who is pushed and overborne by the mob," the claims of every kind of knowledge, might well stand as a prelude to the reconstituted system.

"*Soc.* Let us suppose a man who understands justice, and has reason as well as understanding about the true nature of this and of all other things.

"*Pro.* We will suppose such a man.

"*Soc.* Will he have enough of knowledge if he is acquainted only with the divine circle and sphere, and knows nothing of our human spheres and circles, but uses only divine circles and measures in the building of a house?

"*Pro.* The knowledge which is only superhuman, Socrates, is ridiculous in man.

"*Soc.* What do you mean? Do you mean that you are to throw into the cup and mingle the impure and uncertain art which uses the false measure and the false circle?

"*Pro.* Yes, we must, if any of us is ever to find his way home" (*Phil.*, 62 A).

In the companion dialogues of the *Sophist* and the *Statesman* the master Socrates significantly becomes the disciple. It is now the "Eleatic stranger," himself by no means a bigoted Eleatic, who enters into the fray "between Giants and Gods," between the out-and-out materialists and the "pure" Idealists, the "friends of Ideas," and proposes a ground of reconciliation. Let us admit, he says in effect, the existence of both the material and the immaterial reality, and let me suggest that the nature which the two must hold in common is indicated by the term "power". "My notion would be that anything which possesses any sort of power to affect another, or to be affected by another, if only for a single moment, however trifling the cause and however slight the effect, has real existence; and I hold that the definition of being is simply power" (*Soph.*, 247 E). And the notion is tentatively accepted.

This does not at all mean, as I understand it, that the Ideas now become powers or "living forces," as Bonitz and Zeller interpret this passage. The Idea was never perhaps in Plato's thought meant to include the whole of being (we saw there was no Idea of soul) but rather to explain it. Now the centre of explanation is moving, as was inevitable in an ethical thinker, from object to subject, from *νοητόν* to *νοῦς*. "Under being we must include both motion and that which is moved" (*Soph.*, 249 B), in other words, both the Idea and that living force, that designing thought which cannot suffer the Idea to be a passive motionless existence. There are now

therefore two kinds of power recognised, one clearly and one darkly, corresponding respectively to final and efficient cause, one consisting in the relation of mind and Idea, design and the designing thought, which form a single reality; the other in a reality which seems to lie outside the correspondence of mind and object, and is accordingly mysterious. Yet this outside mysterious nature affects both sides of that correspondence. (1) The final cause only operates in the world of efficient causes. Being is no longer static, nor motionless, but in process. Being has "mind and life and soul," and so "becoming must be attributed to being"[1] (249 A). The activity of mind, therefore, in relation to the Idea cannot consist in "the pure contemplation of pure existence". From the very beginning the purpose that first appeared illuminating the Idea but now is revealed as being only reflected there implied a heavier task. The ordering power of reason implied a world to be ordered. Plato has therefore to insist on the formative power of thought, the moving cause that corresponds to the process of the world. The stress shifts from the form to the forming mind, from good as object or form of creation to good as will or creative power. The importance of the thought-subject, at first obscured in the discovery—for to Plato it was nothing less—of the thought-object, is now insisted on. In the *Sophist* it is stated that the belief that God is the Creator of things must *in course of time* come to be held by every philosophical mind (265 D), and in all the later dialogues the superior if not supreme mind-power is insisted upon.[2] This conclusion was implicit all along in the teleological scheme. (2) The thought-object also is involved in a new complexity. Were there only mind and the Ideas, all might be well, for the Ideas essentially correspond to the designing mind. If they cease to be by themselves powers or purposes, they remain the counterpart of purpose as designs. But the correspondence, owing to this pervading third nature, is unhappily imperfect. The ordering power of reason implies imperfection in the world to be ordered. Reason works through means that are far from being its obedient instruments, through efficient causes that only imperfectly minister to design, and yet are somehow necessary to its existence. So the conception of

[1] Plato does not say that either mind or the forms come to be: "the most divine things of all remain unchanged" (*Stat.*, 269 C). What then becoming is, *which involves both*, is a question that he has presently to face.

[2] *Cf.*, besides the passage referred to, *Stat.*, 269 C, 270 A; *Phil.*, 27 B; *Tim.*, 29 E and *passim*; *Laws*, 892 *sqq.*, 962. With these passages we may contrast *Rep.*, 516 C; *Phædo*, 99 C.

necessity appears as the complement of the conception of power—an inevitable concession made to the claim of the "Giants". For the admission of necessity is a denial of the Idealist position, inasmuch as it gives some degree of independence to "efficient causes," and therefore to some nature that is neither the designing mind nor the character of design. Where there is necessity the efficient cause is incompletely controlled by the final cause—a perplexing conclusion which Plato is now driven to express in the form of myth. In the *Statesman* God is represented as for a time rolling the world on its course, but "there is a time, on the completion of a certain cycle, when he lets go, and the world being a living creature, and having originally received intelligence from its author and creator, turns about and by an inherent necessity revolves in the opposite direction" (269). The efficient cause is not for ever subservient to the final, and Plato's intensely ethical mind finds here a mystery opaque to thought. The whole problem now centres round the relation of efficient and final causes, and the question the *Phædo* had professed to solve is reopened in the *Philebus* and *Timæus*.

In the *Philebus* and the *Timæus* Plato faces the essential difficulties, now revealed, of a teleological system. Plato finds the road of explanation no easy one: rather "the storm gathers over us and we are at our wits' end" (*Phil.*, 29 B). The increasing activity of differentiation and the increasing catholicity which we have been tracing in his thought set great difficulties in the way. When the tools are finer the task is the more hard. Plato cannot now, like the "wise people of the day," his Megarian friends, pass immediately and casually from the One to the Unlimited. He has realised the infinite stages that intervene. (*Phil.*, 16 A-17 A.) And therefore again he cannot like the same wise men abstract reason and knowledge from the world they illumine and find the good in a light that shines only in the void. "The life of mind" in turn proves insufficient. "I want to know," asks Socrates, "whether any one of us would consent to live, having wisdom and mind and knowledge and memory of all things, but having no sense of pleasure or pain, and wholly unaffected by these and the like feelings?" (*Phil.*, 21 E.) The good must be sought somewhere and somehow in the "mixed life". The nature of the universe, like the nature of man, is a mixture. The good for man is still found in the good of the universe. The harmony of the universe, "the seasons and all the delights of life," and "ten thousand other things such as beauty and health and strength, and the

many beauties and high perfections of the soul" (26 A), arise from the union of the Unlimited with the principle of law and order. And because this harmony is good, above it all there must exist as cause the creative power of mind, which is king of heaven and earth, and ordains laws and appoints measures for the nameless fluidity of the ἄπειρον.

In the *Philebus* the two determinant elements of the Idea of the Republic are at last clearly distinguished. The form becomes the πέρας, but the power is transferred outside the form to the αἰτία. (If so the laborious attempts of German scholars to identify the earlier Idea with one or other of the classes of the *Philebus* are beside the point. One would think, to read the various solutions offered, that Plato had here set a "Puzzle—Find the Ideas" to his commentators.) We may note also that this distinction enables us to relate the Idea doctrine of the *Philebus* to the Idea as criticised by Aristotle, in which the formal aspect alone remains. The Ideas stripped of their character as powers are becoming more and more just abstract principles of proportion or numbers. In a sense this transference of value removes the principles of the good from the Idea world while it explains the relation of good and proportion. For even if the good is always realised in proportion, it is not identical therewith, because the goodness of mathematical ratios does not rest on considerations falling within the mathematical sphere, on mere considerations of simplicity and numerical perfection. (Plato had seemed to say originally that God "geometrised" for the sake of geometry.) The proportion that is good is the good proportion. As proportion its goodness is mediate or reflected, and mind finds the "why" not in the ratio or number as such, but in the reason beyond the ratio—a reason which we can simply call goodness[1]—which brought the proportion into being; not in the equation which gives the curve but in the beauty or service which is the goodness of the curve. (It follows, though Plato does not insist on the fact, that for the fulfilment of the world not only proportion and number but also the anomalous third nature is necessary, and thus good and evil, in the world, we know appear as curiously related as Socrates pronounced pleasure and pain to be.) The εἶδος is therefore only secondary for the ethical mind;[2] it is the moving principle that is the object of search. Hence the comparative neglect of the Idea in the later dialogues. If Plato's

[1] The underlying thought is here quite consistent with the doctrine of the *Republic*, but has to find a different form of expression.

[2] *Cf. Laws*, 875, where law and order are represented as second-best; also *Stat.*, 294, where the idea is applied to the government of the State.

interest had been, as generally represented, logical or metaphysical, the later works, after the demarcation of the formal principle in the *Philebus*, would have constituted a neo-pythagorean metaphysic such as his one-sided disciples pursued, instead of works on ethics and politics. To find the Good still in the Form is to misunderstand the development. The centre of ethical struggle must be the soul, and ethical explanation must be sought there. It begins to appear that it is the mind which is the seat at least of some desires (*Phil.*, 47 E), that it is the mind round which ethical struggle centres, and that it is from the mind, not from "forms of ignorance," that there arises error, which all along has been baffling our construction. It may seem an objection that in the list of goods mind has only third place, but (1) it is obviously (*cf.* 28 and 22 E) the human intelligence in so far as it only apprehends and does not create measure which Plato classes as third; (2) the standard of all measure is mind, though not human mind: ὁ δὴ θεὸς ἡμῖν πάντων χρημάτων μέτρον ἂν εἴη μάλιστα.

Hence the starting-point of the *Timæus*. In the *Timæus* Plato seeks once more to "explain" the universe as it is in the broadened and differentiated conception to which he has now attained. His object now as ever being to find first the good in the universe, that then he may bring it down to man (so the doctrine of the *Critias* was to have completed that of the *Timæus*), he must start no longer with the Idea, but with mind, and explain the object-world as it answers to the creative purpose, the fulfilment, so far as there can be explanation, of the design of God. But the form of the *Timæus* is significant, for Plato can no longer pretend to justify the world in reasoned discourse, after the short and easy method of the *Republic*. Parts of the explanation must necessarily be dark.

Mind, the designing rational thought, is according to the *Timæus* not supreme nor alone. Apart from the "patterns" —whose relation to mind is no difficulty for Plato, nor indeed does there seem to be here any problem that could profitably be discussed[1]—there exists the third nature that is outside

[1] The contention of certain ancient Platonists and modern critics that the forms in the *Timæus* are "only" "the thoughts of God," while meant to reduce one side of the eternal correspondence, seems to involve an essential misunderstanding of Platonism. It seems to regard "thoughts" as somehow only subjective, a perfectly meaningless hypothesis from the Platonic point of view. The forms are doubtless the thoughts of God, but they are also the forms which God thinks. So for Plato "the pattern exists from eternity" (38 C).

the direct correspondence of mind and object. We know it only by "a kind of bastard reason," though we have long ago, in the perplexities of ethical explanation, been compelled to infer its existence. The identification of the good and the rational, the living thought that essentially only the good in existence is intelligible, can be held now only on the supposition that the designing mind is not all-powerful. "God desired that all things should be good and nothing bad, so far as this was attainable" (*κατὰ δύναμιν*, 30 A). The material even of the cosmos can never fully answer the sculptor's design. Plato was perplexed by the combination of wonderful adjustment in the physical world with instability and perishableness. Given the initial "impurity" of sense-material, physical law, the taking on of form, is the realisation of the best through that material.

So in the *Timæus* Plato constantly and in a great variety of ways suggests that the limitation imposed by mind on its world is the source of the evil that exists. The divine mind though always desiring the good perhaps looked sometimes on the pattern of the created instead of on the unchangeable (28 A). Or he delivered the creation of mortal body into the hands of the children of God, who can only imitate the divine originator (41 D). Or, less mythically, the creative mind has to persuade necessity in order that its creation may be perfect, which is only in those things wherein intelligence "gets the better of" necessity (48 A). So God in the creation of the mortal and visible must work in the material of mortality, must bring time into being and accept the necessities of space,[1] and with the "necessary contributory causes" as his ministers accomplish his work (68 E). Thus in the *Timæus* Plato admits at last, though with no loss of faith in Ideas, the facts on which any materialism must be based, and expends all his ingenuity of thought to suggest a way of reconciliation. The whole problem turns on the relation of final and efficient causes, and the dilemma is that while Plato must admit the reality and indeed the necessity of the latter he must equally insist on the superiority and priority of the former. How can the mysterious efficient cause be at once dependent and necessary?

It is significant to compare the account of the relation of efficient and final causes given in the *Timæus* with that of

[1] The conception of time in especial and its relation to plurality was a great difficulty for Plato. In the *Parmenides* the very important notion of the "moment" breaks in upon but does not further the argument (155 E *sqq.*). In the *Timæus* the difficulty of time is postponed for future discussion (38 A).

the *Republic*. In the *Phædo* Socrates had denied that efficient causes are causes at all; they are simply "conditions" that seem to offer no resistance to the final cause for which they are conditions. In the *Timæus* efficient causes are still not fully causes (*αἴτια*) but they are contributory (*ξυναίτια*). Efficient or secondary causes are *ἐξ ἀναγκῆς πεφυκότα* to God as well as to men (68 E), the necessary means and sometimes the obstacle, in that sphere in which man must live and which God has tried to make most fair, to the realisation of the divine. Having reality they have therefore power, and having power they must share too in life, in 'soul,' though not in mind. Thus the world-soul, as Zeller points out, "represents primarily the efficient forces in the universe," and is perhaps the last expression Plato gave to his refusal to accept as an ultimate explanation of anything the formula of mechanical causation. So, strangely enough, all the elements of the Platonic universe, body and soul of the created world, the lesser Gods and the God himself, are now endowed with life—except the forms. These are still maintained, are still necessary. If indeed the final cause is prior to the efficient the form must exist before its realisation in the world. But the self-sufficiency of the Idea is no more.

Lastly, in the *Laws* the same conclusion is borne out, though the reasoning is looser. In the *Laws* Plato again definitely states the problem of materialism and idealism in terms of efficient and final causes, identifying with materialism (891 C) the doctrine of the self-sufficiency of efficient causes. But his position is not really idealistic, but dualistic, and that in a rather confused way. Although the argument *ψυχὴ ἀρχὴ κινήσεως* is brought forward, and all motion is referred to soul, the self-moving, and with motion all that was hitherto associated with becoming, even evil (896 *sqq.*), yet that is not properly the earlier contention that the final is always prior to the efficient cause. Soul in Plato is not mind (*cf.* 892 and 962), nor should the movement of 'soul' be necessarily the working of intelligence. Because in the *Laws* the place of intelligence is contracted (*cf.* 728 A) and 'soul' and 'mind' hardly distinguished, the original problem whose steady movement we have hitherto traced is in no wise advanced there. The analysis is throughout incomplete—in fact the work does not intend to be analytic, but only 'popular' and dogmatic. The ethical dilemma is nowhere more apparent—wherever the mind of Plato can trace unity of system it seeks, but without success, to find unity of design. So at one time Plato speaks of God as the measure of

all things (716 D) and of the universe as the organism of the good (*cf.* 903 B), and at another he declares that there is more of evil than of good (906 A). But in the main, in spite of its 'popular' representations, we must regard the argument of the *Laws* as that of a divine mind shaping through conflict a world that resists the impress of intelligence and the good. We must note that Plato speaks of an evil world-soul, but not of an evil God. Intelligence and good are still essentially related, though the relationship is complexer and more hard to understand than it was before.

To sum up the argument of this paper. The Idea theory of Plato was the expression of an ethical need. Plato saved the good in a world of Heraclitean change by adopting the way of Ideas. The Idea had thus for Plato a double character, due to the divergence between the means of finding the Idea, the method of concepts, and the end the Idea served. The method was, under the fundamentally ethical activity of Plato's thought, reduced, indeed wrested, to the service of the ethical end. Hence the system of the *Phædo* and the *Republic*, which finding the real in the Idea and identifying therefore the real with the Good, solves the ethical problem by dismissing to unreality all that is phenomenal and transient and false and evil. Where it cannot find value, it denies existence, and thus we may call reality both One and Good. For a moment the ethical and metaphysical claims seem in accord, but the reconciliation is only apparent. The ethical attitude implies the reality of evil, being as essentially an aversion from evil as a contemplation of Good. Further, the double nature of the Idea involves a contradiction which becomes clear as the method is applied more widely. In fact it becomes evident that the way of Ideas gives reality to evil no less than to good. Plato had thought to find everywhere the λόγος, the designing mind; if the Idea is everything, then everything is explicable, for the Idea is the revelation of the λόγος. But a thousand things resisted explanation, resisted inclusion in the Idea,—change and all becoming, time and space, the contradictions and inconstancies of sense.

The Form is manifested only in the world of becoming; and the Good we are seeking must be sought for in this "composite" world, and so must be regarded not as simply form but as that form which mind impresses—mind always fulfilling so far as possible the good—upon the inchoate. So the ethical interest moves from the form to the forming mind. The essential process of the theory is due to this

necessary shifting of the ethical centre of gravity, the centring of "value" no longer in the object of ethical contemplation but in the subject who contemplates—and does more than contemplate. Through this transference the Idea loses its original and composite character, and becomes simply form, the good proportion impressed by the forming mind, *διεσχημάτισατο εἴδεσί τε καὶ ἀριθμοῖς* (*Tim.*, 53 B). So in the later doctrine the One, or the scheme of relations in which the world exists for thought, and the Good, or the purpose revealed in that scheme, are partially divorced. The difficulty of this divorce is never overcome, perhaps never can be for ethical thought. All we can say is that Plato moved nearer and nearer to the heart of the difficulty. But because he was not building a metaphysical system but seeking an "explanation," his work neither was nor could be completed. The work stopped not because the building was complete but because the builder was old. We can trace however the aim of the builder, and we can understand how the dominating ethical motive determined the work. From the ethical standpoint the development is consistent throughout. Only it is important to see that this very development was itself conditioned by the ethical postulate that metaphysical truth in its turn is the revelation of the system of being in and through which the good is realised. Hence the dilemma from which Plato has after all been unable to escape, the essential problem of reconciling teleology with any metaphysical construction, ultimately the issue between the ethical attitude with its insistence on a necessary antagonism and the metaphysical with its demand for unity.

IV.—"MATTER AND MEMORY."

By Edward Douglas Fawcett.

Part I.

The intuitionist or immediatist Method of Henri Bergson is a phase of the revolt against belief in a rational, or rather merely rational, Absolute. So long as philosophers can regard Reason as "sovereign of the world," and such that it is seen, even though darkly, in the mirror of our conceptual thought, a method such as Hegel's imposes itself. Our wider concepts are not mere *substitute-facts*, symbols which may be unlike that for which they stand, but are "Universals" partaking of the essential character of the "sovereign" power. Hence a method which displays the articulation of concepts becomes compulsory—all else of theoretic worth must be treated as quite subordinate to this end. And here I must contend that Hegelianism and the dialectical Method are intertwined—that the secret of Hegel must be taken along with this much-abused, but strictly relevant, method, or left. A bowdlerised or modified Hegelianism is self-slain. If the Concept or Notion is *prius*, if all seemingly other reality is just its precipitate or showing, then a *conceptual* dynamic must be looked for and found. And in the "contradiction" which "above all things," we are told, "moves the world,"[1] there is proffered a principle of movement, a hypothetical dynamic, which meets a want. Some such principle *must* be forthcoming. And dialectic, which is held to be illustrated in the rethinking of things by the true philosopher, would seem to be the only one which is available. Accordingly, Hegelianism proper stands or falls with the dialectic. And those neo-Hegelians who reject the method, are in that very

[1] Dialectic (a contention not always borne in mind) is not merely a philosopher's method. It is the "universal" power. Hegel urges that even "the physical elements prove to be dialectical. The process of meteorological action is the appearance of their dialectic. It is the same dialectic which lies at the root of every other natural process." *Cf.* Wallace, *Logic of Hegel*, p. 128.

act severing their ties with Hegel and tramping away once and for all into hostile camps. They have to fall back on a non-rational factor, if only to account adequately for a London fog.[1]

Mr. Pogson, to whom we owe the translation of "Time and Free-Will" (*Les données immédiates de la Conscience*), notes Bergson's rejection of the conceptual method which he regards as "the dominant tradition in philosophy. For [Bergson] reality is not to be reached by any elaborate construction of thought; it is given in immediate experience as a flux, a continuous process of becoming to be grasped by intuition, by sympathetic insight." Concepts break up this flux into stable, but dead, parts, the primary values of which are merely practical. To get at reality in its living movement we must break out of the prison of concepts and immerse ourselves, as best we may, in the flux. It is at this point that we hark back to the teaching of Schopenhauer; herald of pragmatists, Bergsonians, and other radical empiricists, myself included, alike. Schopenhauer waged war tirelessly on the Concept and urged, with contempt for the discursive understanding, that wisdom lies "in the perception," *i.e.* in concrete appearances. He held also, like Bergson, that intellect has been forged for practical ends and, working with concepts, does not reach ultimate philosophical truth. Schopenhauer, it must be admitted, does not think always up to the height of his intuitionist gospel. The preacher has not reformed fully his own practice. But he has voiced the need for a change in metaphysical method, and this initiative, once scouted by verbalising "university-philosophers," is being endorsed in many independent and progressive quarters to-day. Observe, by the way, that under the new *régime* metaphysics may retain all its old breadth of view. There is no call for radical empiricists to confine their outlook to the limited appearances of which they and other human experients happen to have been aware. They ought to be prepared to supplement these appearances very freely at need; to feign knowledge of a macrocosm in the shape of truth-claims, many of which are unverifiable at the moment in full. Appearances, they must contend, are to be taken at their face-value and are real; and further they are such as to invite us to go beyond them imaginatively on the great scale. A *probably true* system, which includes the limited empirical data and which suffices, at any rate, for the guidance of our lives, is wanted. It will be recalled that even

[1] *Cf.* preceding note.

Dr. Schiller has penned an ontology which goes far beyond appearances such as present human, or even superhuman, experients could confront. From the reality of the soul or finite centre he toils up the ladder of inference towards precosmic and post-cosmic being. Such attempts seem legitimate, if it be that appearances, despite the limitations of our direct knowledge, suggest strongly in what directions our speculative supplementations of them must be risked.

Modern panpsychists owe a further debt to Schopenhauer in respect of what Mr. H. W. Carr describes (in connexion with Bergson) as "the magnificent *élan vital*, into which the whole of existence is gathered together and whose immense *poussée* has evolved innumerable lives". That which is labelled by Schopenhauer. and most unhappily, THE WILL is just this giant psychical life—the Immemorial Being of Schelling, which creates extra-logically, not in the way contemplated by finalism, still with the certitude of instinct. And it is just this universal creative life whose plunge into the time-process and space I have sought to describe in the course of my own conspectus-biography of the "Ground".[1] Schopenhauer, by the way, seems to have thought that an intuitionist method leads to an immediate discovery of this Ground. But in this matter his dominantly mystical bias has carried him too far. Direct awareness does not go beyond the 'psychical continuum'[2] which constitutes the territory of the finite centre. This continuum, however, serves as a jumping-off point for inferential thought; a point whence I can rise by symbolic supplementation of my direct knowledge on to a level where there obtains a wider life. My vision cannot reveal *immediately* that which only a veritably cosmic experience could show. Inference, then, for a being on the human level, is essential; there is available no direct experience such as the ideal of a world-intuition requires. It is owing to our limitations in the quarter of direct feeling that the intuitionism of the mystic has to be helped out by the circuitous theorising of the philosopher.

What attitude will an intuitionist and panpsychist, who is not pragmatist, tend to take up in the matter of Truth? Here we must enter on the hazardous path of prediction, but a suggestion, not perhaps wholly unsatisfactory, can be made. Mr. J. E. Russell[3] asks what is the something,

[1] Since penning the *Individual and Reality* I have taken the further step of labelling this Ground the 'Cosmic Imagination'. I shall justify this step more fully in a special work in which the origin and import of Nature and the main phases of conscious life will be discussed.

[2] *Individual and Reality*, p. 77.

[3] "Truth as Value and the Value of Truth," MIND, October, 1911.

other than value, which characterises a true idea Well, the essential character of "Truth" is that it is a *partial* awareness of reality, whether this awareness happens to possess a value or not.[1] Sometimes this awareness is of aspects of presented reality. No correspondence hypothesis of truth covers this situation. The truth here lies within the reality—is the more illuminated portion of it, the focal glow-point of attention as contrasted with the barely awared fringe. But very often the reality, in which I want to aware aspects, is not presented. And in this case I have to feign its presence—feign direct awareness of it—in a substitute provided in an imaginal or verbal-conceptual way. If, however, later I want to "verify" the substitute, I must, if possible, attain direct awareness of the reality and discover whether the substitute is like it, represents it sufficiently well to subserve my interests, theoretic and practical. In other words, the *Correspondence* between idea and its object must be tested. Owing to the narrow limitations of direct experience, I must aware many truths which imply Correspondence, but, again, there are many others which do not exhibit this feature at all. Thus awarenesses of perception, nay even the all-important awareness of the psychical continuum,[2] do not show it. At the other extreme I note competing systems of philosophical truth which arrange hosts of propositions in various arbitrary ways. These, not being themselves Reality at large, must represent, symbolise it ideally, in not too lamentable a fashion, or stand condemned. An ideal representation of this sort may be treasured by folk who want to preserve it intact and who resent any further effective appeals to the reality which it served to translate. Once created, in fact, a system is often kept aloof from its 'object'; and its guardians may even justify this aloofness, rolling their eyes skyward in the peace of faith. The truth-pemmican of propositions is believed to possess somehow an intrinsic excellence, all its own: there are preposterous conservatisms in the history of thought. What now must the despiser of the pemmican, the radically reforming genius, do? He must inquire whether the substitute-fact, or system *corresponds with*, mirrors or represents sufficiently, the reality for which it seeks to stand. And he will find, perhaps, that the major part of it, when tested, consists of truth-claims rather than truths and that a "system," at best, is only

[1] In moods of idling and reverie it can hardly be said to possess any value. It moves towards no interest.

[2] *Cf. Individual and Reality*, p. 77, on the "whole-feeling" which attests this.

a propositional make-shift, furnishing a thin and inferior kind of truth to be desired only when direct intuition has failed.

An 'idea' which, as in the cases of "judgments" of perception, is in and of 'reality' is true, because awareness of it is *at the same time* awareness of its 'object'. Nothing can be referred more properly to reality than that which is already there! And this fundamental type of truth lies behind all the later indirect and symbolical devices which our limitations enforce. Truth, at its best, is a partial but direct awareness of the reality or object. If, however, a direct awareness is not to be had, there must be found or made a substitute-reality; awareness of the like being for practical purposes, and *quâ* likeness, awareness of what it is like to. Note here that a *complete* direct awareness of all reality—of all aspects of the universal psychical life or Ground—in simultaneous presence would transcend truth. The total illuminated would be truth and reality at once. Truth would be both abolished and preserved; would be the awareness aspect, reality the content aspect, of the awared whole.

Truth being the partial awareness of reality (an awareness which may or may not possess a 'value'[1]), the method which does not play overmuch with desiccated concepts, but goes directly to reality itself, will, other things equal, be the best. Intuitionism, which is the method of the mystic as well as of certain system-framing philosophers, is indicated whenever direct experience is such as to furnish it with the required field. The vice of most intuitionists and mystics is that they pretend too often to intuite when they have no direct experience in front of their talking.

What now is error? There can be no false appearance in directly awared feeling. An idea may be relative to, and coloured by, all other contents of the continuum wherein it shows, but this feature does not rob it of truth. Here the idea is also awareness of its 'object'. And the 'object,' again, is real in a relativity, which supports and does not destroy the reality of its phase.

Error, then, characterises only the *substitute-fact.* And we seem to be able to say pretty clearly in what error consists. "There are Centaurs in Arizona" is sheer error. Now in this case there is a direct awaring of contents imaginatively which is as real as anything in the universe can be. But this *reality* on one level of my conscious experience is not *true,* because it does not represent the other possible reality—Arizona etc., as it might be awared directly by me. It is not a substitute

[1] *Vide supra.*

which, when tested, is found to be sufficiently like the reality of *primary* interest. And because it is no true substitute, it is *also* without value. I want to aware directly the fauna of Arizona *as it is*, if I am merely interested in knowledge. I want to do so equally, if I intend to move in the matter of a hunting-expedition aright. But direct awareness being temporarily impossible, I have to proceed on the principle: Awareness of the like is *quâ* likeness, awareness of what the like is like to. If the makeshift awareness is unlike what the direct awareness will be, then the makeshift awareness is untrue. And consequently, but only consequently, of no value.[1]

What is the error of materialism? Materialism is the hypothesis that the universe is matter in movement. And what is matter? A concept which is also a command[2]—a word which bids us attend to complex realities *as if* these were only resisting-extensions. If you take the concept, not merely as useful for certain purposes in mechanics, physics and chemistry, but as equivalent somehow to reality at large, you are a materialist. And your error is just this. In awaring directly this gaunt concept you are feigning awareness of the indefinitely richer universe. But in this case the 'less' is not such that it can stand for the 'greater'. Matter is a pauper-denizen of the conceptual world. A substitute-fact, *real* on its own level, it is not full enough of content to be regarded as *true*—as adequately symbolic of the larger reality for which, in your metaphysics, it stands. Awareness of it is not to a sufficiently complete degree awareness of the universe. You cannot glimpse in and through it the general character of reality. In other words, your initial purpose is thwarted.

What is the error of Faith? The objects of Faith are real, at any rate in their own domain, the private imaginary world of the believer. The error lies in taking these objects as true *as well as* real—in regarding them as substitute-facts for reality, which, to attest itself, would have to appear in another way, but does not.

[1] Value may attend truth with the loyalty wherewith Gravity haunts Mass, but the attendance is not identity.

[2] The concept Matter is thus not purely theoretic. This intention-aspect of certain concepts is very interesting, especially in those cases in which the veiled intention has not been realised or is not realisable at all. My present concept of a thousand-sided figure includes an intention not carried out, but *assumed* to have been converted into fact in a mental world. My concept of "round square" is real and can be a subject of predicates, but in this case the intention, which is the very soul of the concept, is not merely not carried out, but cannot be carried out at all.

Enough has been said for present purposes respecting Method and Truth. I propose now to discuss certain alleged deliverances of Intuitionism which are found in Prof. Bergson's *Matter and Memory*, certainly the most difficult and, to my thinking, much the most important of his three chief works. And I will lead up to the subject by examining briefly a vital contention which is put forward in *Time and Free-Will*. My object is to throw into relief a very unsettled problem respecting space: a problem which recurs in *Matter and Memory* and seems not to receive that decision and consistency of treatment which are required.

The drift of *Time and Free-Will* is as follows. The first of the three chapters discusses "The Intensity of Psychic States," and it is urged that the so-called degrees of Intensity are differences not of quantity, but quality. There are not two sorts of Quantity, Extensive and Intensive. Sensations, emotions, ideas are not Phenomena which show growth and diminution; are not magnitudes which can be compared as greater and less. To treat them as magnitudes is to import into the sphere of the inextensive symbolism derived from experience of space—of size, distance, juxtaposition, of container and contained and so forth. This treatment may be of practical convenience, but it must not be regarded as truthful. And the issue is a vital one. It "may be asked whether the insurmountable difficulties presented by certain philosophical problems do not arise from our placing side by side in space phenomena which do not occupy space, and whether, by merely getting rid of the clumsy symbols round which we are fighting, we might not bring the fight to an end. When an illegitimate translation of the unextended into the extended, of quality into quantity, has introduced contradiction into the heart of the question, contradiction must, of course, recur in the answer."[1] Having urged that Intensity is qualitative, Prof. Bergson, in chapter ii., proceeds to free the topics of "Duration" and "succession" from the incubus of this Space-symbolism, and fares thence to consider the now greatly (as he surmises) simplified, if not almost abolished, problem of Free-Will. A false Space-symbolism, he thinks, has been vitiating all previous discussions of the closely-allied enigmas of *Time and Free-Will*. The "Intensity" chapter is, therefore, indispensable.

In reviewing this work recently I submitted that Bergson accepts uncritically the old philosophical superstition to the effect that "psychic states" are unextended and that this

[1] *Time and Free-Will* (Author's Preface).

initial error invalidates his entire argument.[1] The point involved is, of course, of capital importance. I shall, therefore, offer no excuse for repeating my original criticism of this portion of the work. I must add that the alternative view that 'psychic states' are, or may be, spatial is vital to my own panpsychistic philosophy in which space (the origin of which has been discussed tentatively) is made to continue right through the history of Nature into conscious life.

Bergson tells us that "even the opponents of psychophysics do not see any harm in speaking of one sensation as being more intense than another, of one effort as being greater than another, and in thus setting up differences of quantity between *purely internal states.* Common sense, moreover, has not the slightest hesitation in giving its verdict on this point; people say they are more or less warm, or more or less sad, and this distinction of more or less, even when it is carried over to the region of subjective facts and unextended objects, surprises nobody."[2] Truly an "obscure point" is involved, but has M. Bergson succeeded in throwing light on it? His solution is to the effect that the so-called 'more' and 'less' always refer to qualitative differences. My reply is that they imply qualitative differences, but, along with these, quantitative variations as well.

I might urge, at the outset, that it would be difficult to justify the description of sensations as 'purely internal states'; a subjective idealism is implied, the same false idealism which clung to Schopenhauer when he too discussed sensations as "wholly subjective states" and invented an intuitive understanding, armed with the category of causality, to extrude and so make them into objective fact. "Sensations" are not primarily internal possessions whose outwardness is just thrust upon them or inferred.[3] But I will ignore this side of the matter, more especially as M. Bergson occupies a far more defensible position in *Matter and Memory*, and get to essentials. It is to be urged, not that certain contents of my experience are external rather than internal,

[1] *The Quest*, April, 1911. Not having at that time read *Matter and Memory* I was unaware that Bergson wobbles disastrously on the question of space. Thus sensations which in *Time and Free-Will* are regarded as "subjective facts and unextended objects" are described in the later book as occupying, and having positions in, space.

[2] *Time and Free-Will*, p. 1. The italics are mine.

[3] *Cf. Individual and Reality*, pp. 71-72 and 187-189. The "sensation" is, emphatically, an abstraction: a late product of that same "dissociation" which carves particular objects out of the original psychical continuum. Among English thinkers Martineau, so far as I am aware, was the first writer who recognised to the full the importance of "dissociation".

but rather that all the contents of my experience, 'external' and 'internal' alike, whatever their residual features may be, are spatial. And we have only to look at experience intuitionally to find that we can aware this important "truth" directly in the "reality" itself.

"My experience," as Mr. Bradley puts it, "falls within my own circle."[1] True, the contents of this circle are continuous with not-given content of a wider reality; not-given content which penetrates and saturates all that the circle contains. But for me, at any rate, only the little circle is flooded with light. The entire external spatial world, *as I know it directly*, is just so much experience within the circle So far, so good. But note that to assert this is to assert that a portion of my experience is spatial, a portion which includes all those 'psychic states' which analysis, *i.e.* attention, carves out of perception. The jar, of which I am aware, is obviously spatial. You may aver, indeed, that my awareness or *consciousness* of the jar is not spatial, but how are you going to divorce awareness or consciousness from contents of which I am aware? And even if you succeed in accomplishing this task, you have not done what is required here. I am concerned now only to maintain that the *contents* just noted are spatial. And I have no need to multiply arguments; it suffices just to attend to the jar intuitionally and record the deliverance in words. A superhuman metaphysician who could become aware directly of my experience would have to return the same verdict as I. Were he conscious of my jar, —a particular object carved out of the continuum of my "circle"—he, too, would be awaring a spatial fact. And as there is no evidence available outside the said fact, he would admit at once that this, as indeed all other contents of my perceptual life, is extended.

But the superhuman would concede more than this. The memory-image of the jar is as spatial as was the jar perceived. For is not the image considered a truthful one only in so far as it resembles the percept? In visualising this image I am aware of varied colours, lights and shades; and to be aware of colours, etc., *which bound one another*, is to be aware of that manner of appearing which we abstract as 'space'. Again in picturing the movements of balls on an imaginary billiard table (and who has not played billiards in bed?), I am aware of positions, directions, shapes, sizes and distances with great clearness. In visualising, also, the rush of an imaginary motor-car I am aware, in a faint form, of move-

[1] *Appearance and Reality*, p. 346.

ments similar in kind to those which occur in my external or perceptual experience. How natural that this should be the case! All sensations alike, as James and others have urged, show a primitive 'extensity'. This 'extensity,' however loth psychologists may be to say so outright, is only another name for spatiality. Sensations and sensation-complexes being primitively spatial, images which profess to copy them must be spatial as well.[1] We might, therefore, deduce this spatiality, were it not that we can always observe it in fact.

Belief in spatiality is not, however, the same thing as belief in space. Space as mere *room* for static coexistence or movement is a conceptual invention. The spatiality of images is that of a continuum, related contents of which appear in this manner. But the conceptual device of an internal room, which is merely filled with loose floating images and is independent of their coming and going, is created as soon as convenience prompts. It may be useful to discuss discriminated images as if they crowd the pre-existing, but once empty, hall of the "Mind". This concept of Ideal or Internal Space, independent of the contents which may show in it, lies behind the doctrine of the *Tabula Rasa*, and takes high rank in the array of useful fictions.

It is not, then, a false symbolism which asserts spatiality of 'psychic states'. Had M. Bergson been thinking more of *contents* and less of the consciousness of them, his intuitionism would have forced him to alter his view.[2] Commonsense seems justified in speaking of 'more' or 'less' even in the regard of an emotion. If I may be allowed to cite from the *Quest* article once more: "M. Bergson may be perfectly right in urging that in the case of an alleged growth or diminution of the intensity of an internal phenomenon, there is always a *qualitative* change. Indeed, this seems to me obvious—in cases like the increase of anger, or the diminution of sexual love, for instance, obtrusively obvious. But I submit that there is a quantitative change occurring *as well*. The 'increased' anger in colouring more content, in invading more of my inner life, does really and not metaphorically fill a larger internal space. And when psychologists write about the '*massive*' character of the emotion, they imply this internal

[1] "Surely when you recall (visualise) a mountain in memory, there are represented not only its colours, etc., but its spatial form. If the latter is not *copied* more or less satisfactorily, it is absurd to talk of the *image* of the mountain being present at all. Obviously the 'extensity' is copied, there is a *magnitude* floating in the experience of the 'internal sense'. Kant failed wholly to appreciate this fact" (*The Quest*).

[2] *Cf.*, however, the subtle change of front in *Matter and Memory*.

space or are using a significant word idly. The spatial rendering of the phenomena of internal experience is not mere *symbolism:* it is truly descriptive of the character of the realities in question." I have sought to show elsewhere that the finite centre, whose contents are just discriminated from one another, but not divided, *is itself spatial*, having its place and extent among other finite centres in that psychical ground or Cosmic Imagination wherein everything to which I can attach a name 'lives, moves and has its being'.

Bergson's "Pure Duration" is the unfolding *qualitative* multiplicity of conscious states, in which there is no succession, and no separation, but an interpenetration of unlike elements. Some will recall that Royer Collard writes that Duration (which, like M. Bergson's Duration, lies not in the object by itself, but in us) is presupposed by succession, and that our feeling of duration rests on the *continuity* of our *activity*. From the combination of Collard's view with belief in the psychical continuum sprung, perhaps, the doctrine of "Pure Duration". M. Bergson, however, is for an intuitionist verification of it. He bids us make an effort and get out of our practical awareness of successive discretes back into Duration. "Pure Duration is the form which the succession of our conscious states assumes when our ego lets itself *live*, when it refrains from separating its present states from former states."[1] Is he urging us toward that awaring of the psychical continuum, toward that Whole-Feeling, which, I have averred elsewhere, is at least as real as any alleged minor 'impression' or 'idea' can be?[2] Clearly so. Once more, then, the space-difficulty is thrust on my notice. I find myself unable to live "*Pure* Duration". There is awared a continuum of changeful feeling, but this continuum exhibits a spatial character as well. The subject-object distinctions and the discriminations within these may lapse almost completely, with the result that my circle of experience becomes momentarily quite a solid feeling whole. Still the co-existence of aspects, with their vague bignesses and places and directions, etc., persists obstinately within the whole. Space, and not merely Duration, pervades the finite Centre.

I cannot gather from *Time and Free-Will* how M. Bergson's world of independent spatial objects enters into the flux of my conscious states, nor why, since it enters, it does not saturate the said flux with space. Difficulties arise which are insoluble on the lines followed by this book.

[1] *Time and Free-Will*, p. 100. [2] *Individual and Reality*, p. 77.

Sufficient, indeed, is the appalling query—How, if *sensations*, like all 'psychic states,' are non-spatial, does a spatial world which is discussed as, in some unintelligible way, a *datum* of knowledge, invade my experience? There is no answer worth the trouble of penning. Shall we deal with the haunting difficulty in another way? Does or does not a spatial world appear in my "circle" of experience? It appears at first as a continuum undiscriminated within itself which, later, is broken by attention into particular objects and sensations. The sensations are specially noticed aspects of this directly awared continuum, and they are necessarily as spatial as the larger tract in which they are noticed and named. This surely is the only solution which an intuitionism, which looks straight at reality, can commend. For intuitionism the non-spatial sensation ought not to exist.

Intuitionism, in fine, does not bear out the view that 'psychic states' are non-spatial. To look at and into my percept and image of a mountain is to be aware of them as spatial. If, however, 'psychic states' are spatial, and if, accordingly, there is no radically false "space-symbolism" which obscures our thought about Intensity, Duration and Succession,[1] the complex problem of Free-Will, which M. Bergson's preludial chapters are designed to "simplify" or even abolish, is with us still. Not that these preludial chapters, even if we were to endorse their results, lead to an illuminative treatment of Freedom. M. Bergson, even at the close of his researches, is unable to define Freedom or show how a free act is to be understood. Why this reticence? Free acts, he urges, are relatively rare, acts that are not free are usual—cannot intuitionism, which awares somehow the difference, record it verbally in some not too preposterous a way? A further consideration deserves notice in this regard. M. Bergson ought not to locate this "rare" Freedom only in provinces of volition wherein the "whole personality" (as contrasted with merely superficial psychic states) is acting. On the lines of his interpretation of continuity, the "whole personality," conscious and subconscious, is always penetrating each of its states. Strictly speaking, he ought to regard all our acts as free. And by this conclusion would hang difficulties.

[1] It is important, however, to discriminate between the view that psychic states are spatial and the crude and quite unjustifiable view that they are so many discrete, but associable, unit-elements "in" a "space" other than their own co-existence. M. Bergson appears to have missed this distinction. He can keep both the continuity and the spatiality of psychic life, if he so desires.

Is it clear, on the other hand, that Bergson's act, which involves the "whole personality," is free in the vital sense for which Libertarians ought to care? I agree with him that reality is psychical, continuous, creative; I allow, further, that materialistic determinism and associationist atomism are nonsense. But what if the "whole personality," with all the novelties emergent therein, is thrust into being by a *vis a tergo?* Freedom is not implied in the fact that the *vis* is continuous and creative! Here once more the trouble is that M. Bergson has only the naturalistic and crude associationist thinkers in view; he says nothing which discredits a determinism such as Dr. McTaggart, for instance, sees fit to profess. Let us make no mistake as to what a true Libertarian must exact. It is not enough to urge that *novelty* is born in the process of volition. Novelties are always being born, even in the cases of those ordinary conscious activities which even M. Bergson does not regard as free. And they are being born always, as I have urged elsewhere, in all processes even of the pettiest sub-conscious 'chemical change'. No: what the Libertarian requires is recognition of a leaven of spontaneity in the conscious making of the novelty. And if that leaven be present, *we ought to be able to point out the critical place wherein it works.*[1] It will hardly be present in the "crisis-act," unless the crisis admits of some leisure for deliberation. It will be present rather in the long and uneventful mouldings of conduct, inward and outward, of which a crisis constitutes only the test. There are crises in which our actions seem to proceed fatally from conditions in which are present what we have created more or less freely for our personalities in the long-ago. It is very often work in the past quiet times of peace that counts, when the war-drum beats unexpectedly and our personalities are launched swiftly into act.

I pass to *Matter and Memory.* We confront here dualism characterised, however, by a toning-down of the popular hard contrast of "matter" with "spirit". And first touching the concept of "matter" which figures so prominently in this work.

Matter is defined, doubtless to the surprise of many readers, as an aggregate of 'images'. Obviously this peculiar meaning of the word 'image' requires to be made clear and justified. We are to understand, then, a "certain existence which is more than that which an idealist calls a *representation,* but

[1] I have attempted to discuss this "spontaneity" (in *Individual and Reality,* pp. 230-232, 273) as an ectype of the spontaneity native to the primeval psychical ground.

less than that which the realist calls a *thing*—an existence placed half-way between the 'thing' and the 'representation'. This conception of matter is simply that of common sense."[1] The plain man is no Berkeleyan—he does not hold that "the object before him, which he sees and touches, exists only in his mind and for his mind, or even, more generally, exists only for mind". He believes, too, that the object, which exists in itself, exists pictorially as it is perceived, "image it is, but a self-existing image. This is just the sense in which we use the word image in our first chapter."

But, of course, here arises an initial difficulty about "common sense". It is true that the plain man believes that concrete *Nature* exists more or less as it is perceived, with its secondary qualities intact. But, when he tries to define, a mere conception, '*matter*,' the pictorial tends, even in his case, to disappear. Testing the point recently, I asked a plain woman—may she never peruse this article!—what meaning she attached to the word 'matter'. "Oh! no, colours, sounds, smells and so on are not matter, I mean by matter *solid stuff*." And I surmise that this 'solid stuff' of common sense is just the rough form of the 'matter' in which mechanical philosophers put their trust, the extension-inertia phantom whose importance in the history of thought is easily understood.[2] 'Matter' is a novelty of the conceptual world, a pseud-entity, an intellectualised form of the habit of attending to certain aspects of sensible reality as more important practically than are the others. And towards the invention of this pseud-entity common sense moves unreflectively, impelled by the need which this very useful fiction subserves.

What we require, in the regard of dualism, is not a theory about 'matter'. Having invented matter ourselves, we ought to know all about it. We shall do well, however, to use this anæmic pseud-entity aright, not to suppose, for instance, like the materialists, that it exists autonomously and contains the potencies of all that reality can own. There exists not, and never has existed, outside of men's conceptions, a *material* world. There exists *Nature* of the type that we perceive sensibly, but that is a very different story. *It is with the problem of Nature, not with the already solved riddle of matter, that we have to deal.* And Nature, while, of course, it has aspects which you can work into skeletal schemes, mechanical and

[1] Author's Introduction to Eng. trans. of *Matter and Memory*, vii. and viii.

[2] *Individual and Reality*, pp. 90-96.

'sub-mechanical,' is, after all, sampled genuinely only in concrete intuition, in experiences in which 'secondary' qualities and even emotional colourings lie blent. It is only defective attention which narrows sensible reality into a *material* world.

Part II.

Chapter I. deals with what my body means and does in connexion with the *selecting* of 'images' for conscious presentation. We are not, at this stage, to be obsessed by the various metaphysical theories as to the 'reality' or 'ideality' of the so-called outer world. Back to the facts!—as they come to unsophisticated awareness.

Objects as they are perceived or as they may be perceived, the '*self-existent images*' already noted, interact in ways which we generalise as laws of Nature. My body which I know both perceptually, as also from within "by affections," is one of them. Cerebral process is only an image within this minor image. The brain is a phase only of the 'material world'[1] and does not *contain* it. "Eliminate the image which bears the name material world, and you destroy at the same time the brain and the cerebral disturbance which are parts of it" (p. 4). The external images transmit movement to the body-image and the body-image responds to them in movements. The body-image acts like the other images, save that it seems to "choose, within certain limits, the manner in which it shall restore what it receives". Assuredly it does not *beget* the rest of the images. These latter may "*be* without *being perceived* . . . present without being represented"[2] (p. 27) [in perceptual picturing], but anyhow their source is not in the brain. The nervous system as a whole is a "mere conductor" transmitting, sending back, or inhibiting movement (p. 40). The brain is no more than "a kind of central telephonic exchange" (p. 19). It adds nothing to what it receives.

Are we to discern an Antinomy lurking behind the familiar assertion that Nature, for each one of us, arises with the happening of certain events in a brain. We seem badly bogged, for instance, if we say that the brain exists *within* Nature, and anon that the brain somehow *contains* Nature.

[1] I have suggested already that it is better not to use the term *matter* when we are discussing *Nature*. Matter is a phantom of the conceptual order.

[2] On objects as existing outside our perceptions, *cf.* the observations on the unconscious, p. 183. The 'unconscious' also plays an important part in Bergson's theory of the pure memory.

And writers of the calibre of Schopenhauer and Bain have floundered very seriously in this morass. I recall that some twenty years ago Dr. Lewins, in the making of an incoherent solipsistic creed yclept "Hyloidealism," sunk to its very depths. On the one hand, he treated conscious life as "vesiculo-neurosis in activity" and, on the other, he resolved the world, which of course must include the "vesiculo-neurosis," into a subjective show.[1] There is a way out of the trouble, if it be that the word 'brain' has two clearly distinguishable meanings and that there are plural *shadow-Natures* as well as a giant macrocosmic Nature of which we can speak.[2] But the statement that the brain is the birthplace of the 'images,' to which M. Bergson invites our attention, cannot be accepted in its popular-naturalistic forms, without monstrous difficulties at once rising into view.

It cannot be said that, in the main, "I represent to myself nothing but the molecular movements of cerebral substance" —for how in such pitiful movements can there lie the actual world that is known? Obviously this contention, as M. Bergson urges, is nonsense. I must submit further that such concepts as the 'molecular movements' of mechanical philosophers need not concern theorists as to the relation of conscious perception and body. They are useful fictions thrust on the universe, not concept-substitutes which answer to fact. Moving resisting-extensions ought to have no place in serious metaphysics. *Concrete* natural movements (which imply qualitative change) happen in what is already psychical in character. There are no barely mechanical processes in Nature. No one has ever perceived them and no one, I must add, can even imagine them. No empiricist ought to tolerate belief in them. Verbal concepts, however, allow us to *intend* facts to be, whether the intentions are capable of existing sensibly or not, and in this conceptual sphere alone lies such tenuous reality as mechanics possess.

As panpsychist I have to interpret Nature just by expanding that vision of it *which I have already*—empirically! Psychical processes are either found or can be supposed everywhere, even in that indefinitely vast portion of Nature which, not being perceived by me, has to be imagined or conceived. But when I do this, I have, also, to note that M. Bergson's view to the effect that the brain receives only 'movements' cannot be true. For the brain, as a phase of the psychical

[1] Mr. Bradley has some remarks on this kind of difficulty, which he treats with his usual subtlety in *Appearance and Reality*, pp. 264-265.

[2] *Cf.* my *Individual and Reality*, pp. 159 ff., where the assertions 'the brain contains Nature'—'Nature contains the brain' are reconciled.

continuum of Nature, is being invaded always by content-activities which the term 'movements' does not symbolise adequately—by contents *e.g.* such as 'secondary' qualities, with the orders in which these come. Once, indeed, that we transcend the category of "Mechanism," the problem of Nature is transfigured, and legions of artificial man-made 'intellectual difficulties' disappear. Intuitionism, which is the higher empiricism, ought to clear discussion by first dismissing the existents ('matter,' 'force,' 'energy,' etc., etc.) of mechanical philosophers as absurd—as not empirically confronted or attested at all. "Look at Nature," it ought to say, "there are no merely mechanical phenomena in what you perceive. All distinguishable phases here are aspects of sentient experience—are psychical in character. And when you want to expand your direct vision of Nature you must make your conceptual expansions of one tissue with what has been sensibly perceived." Is it worth while to wage a protracted guerilla war against Naturalism, or crude Dualism or Materialism? Is it not better to demolish their capital city outright—to point out that no such Nature, as they talk about, can exist or has ever existed outside human heads?

Is M. Bergson taking the 'molecular movement' folk too seriously, or is he, perhaps, playing, in amused cat-like fashion, with his mouse? The concluding chapters of the book show that he does not believe in the mechanical philosopher's world, and suggest that it is really panpsychism which holds sway at the back of his mind. On the other hand, his thought oscillates. And we shall find that the ghosts of a defunct mechanicalism haunt and mar his treatment of some of the most serious issues which he undertakes to decide.

What now is Bergson's solution of the problem of conscious perception? First note that the 'motor response' hypothesis of cognition has pointed his thought. I refer to the "Cross-section" hypothesis which was carried so far by William James. "The theory of Evolution is beginning to do very good service by its reduction of all mentality to the type of reflex action. Cognition, in this view, is but a fleeting moment, a cross-section at a certain point of what in its totality is a motor-phenomenon."[1] James is emphasising the physiological accompaniments of cognition. And the view seems delightfully congruent with his belief that 'intellect is built up of practical interests'. But it works amiss. For there are certainly many cognitions which, though they show a practical side, have issues obviously not embodied in motor

[1] *Principles of Psychology*, ii., 313 (Macmillan).

response. What, for instance, has thinking about the genesis of Nature, the awareness of space, the Absolute, the schematisation of Kant's categories, and the like, to do with such response? However, suppose that we are to consider, not all the modes of conscious awareness, but only *perception*, is the motor response hypothesis of sterling worth? At this juncture we return to Bergson. He, too, has said that the body only transmits or inhibits movements, but he wants *also* to know (what the above-cited passage from James ignores provisionally) why and where perceptual cognition supervenes. What is *pure* perception—*i.e.* perception freed from the memories which saturate it in fact? Well, he regards the brain, with its many motor mechanisms offering scope for "an ever larger number of possible actions," not as a place of *fatally* determined relations between stimulus and response, but rather as a centre of indetermination, in which, towards the higher end of the animal series, actions become less and less necessary.[1] Perception is essentially related to action—to the guiding of response. It is a mode of choice which prepares actions, whether these are merely nascent or anon accomplished. It "consists in detaching from the totality of objects, the possible action of my body upon them. . . . It creates nothing; its office, on the contrary is to eliminate from the totality of images all those on which I can have no hold, and then, from each of those which I retain, all that does not concern the needs of the image which I call my body." Idealism, he urges, is right in saying that all realities have a kinship with consciousness, whence, indeed, the basic justification for his use of the term 'images'. But 'images outrun perception,' and hence idealism is not entirely satisfactory. "It is just these images that science and metaphysic seek to reconstitute, thus restoring the whole of a chain of which our perception grasps only a few links. But in order thus to discover between perception and reality the relation of the part to the whole, it is necessary to leave to perception its true office, which is to prepare actions. This is what idealism fails to do."—An initial criticism must be to the effect that M. Bergson has only the more 'subjective' of the idealist schools in view. Since by the use of the word 'images' he is suggesting that all realities have kinship with consciousness, in a word, are psychical in character, and since, further, he is urging nothing which objective idealism cannot endorse,

[1] It must be noted, however, that in *Time and Free-Will* it is said that "we are rarely free" (p. 231). But if even we high animals are rarely free, what of conscious spontaneity on its lower levels?

he is demolishing only those one-sided idealisms for which conscious finite centres or a conscious god aware all that reality is and owns. Even Mr. Bradley (who is held by some to be too 'subjective') allows that there may obtain fact outside the experiences of finite centres; fact of which his Absolute, not being a person, cannot be aware in any human sense of the term. A further objection. Is it accurate to aver that the "obscurity" of idealism is due to the fact that it considers conscious perception and its conditions, as if only a question of 'pure knowledge' were involved? Surely all serious modern idealists allow that, historically speaking, perception grew up in practical alliance with the evolution of organisms. Consciousness, as even Schopenhauer has urged, emerged as the slave of body. And now we stand at some distance from rethinking the *fait accompli*, as if animal interests and actions had never influenced the forms emergent in perceptual life.

But to return to the main issue. Bergson has said that the brain only receives arrests and transmits movements. However, were it only to receive *mechanical* movements, there would not be perception in and through these of the 'images' which are external to body. But movements of the above order are at best symbols. We have to get rid of abstract mechanics and to suppose an extended *continuum*, psychical in character, in which lies the body. The activity of the body will then "appear to illuminate all those parts of matter [Nature?] with which at each successive moment it can deal" (p. 309). "Everything will happen as if we allowed to filter through us that action of external things which is real, in order to arrest and retain that which is virtual; this virtual action of things upon our body and of our body upon things is our perception itself" (*ibid.*). Perception, our virtual action, is, therefore, *selective*. And the neurosis said to be allied with it is not its cause, but its *continuation*, the active response already begun. All this is sun-clear. If we "restore to movement the unity, indivisibility and qualitative heterogeneity denied to it by abstract mechanics[1] . . . see in sensible qualities *contractions* effected by our memory" (p. 36), we reach a psychical Nature, of which the body is a mere phase. The rest of Nature interpenetrates this body. And out of

[1] *Cp.* William James, who regarded concrete movement as a continuous feeling "only decomposed into elements—successive portions successively occupied by the moving body—when our education in discrimination is much advanced". This attitude is implied in all panpsychism which emphasises continuity. And it is the recognition of this concrete movement which Bergson brings to bear against the familiar arguments of Zeno.

the totality of penetrating images certain are attended to and reacted on; and these are just the objects perceived. Of the universal "plankton" perception catches only a few animalcules in its net.

Having reached a psychical Nature by another route and equally affirming belief in the interpenetration in question, I can have no quarrel with the *general foundations* of this explanation. Intuitionism dictates the lines on which such inferences, supplementing our direct knowledge, have to be framed. We have here, of course, a heritage which has come down from the objective idealism of Schelling, whose Nature, already psychical, merely shows its character overtly to conscious life. But when we pass from consideration of the general foundations to that of the superstructure, there may well arise different interpretations of the facts.

Can it be alleged, for instance, that "our representation of things would thus arise from the fact that they are thrown back and reflected by our freedom"? (p. 29). For we are assured in *Time and Free-Will* that "we are rarely free" (p. 231). And yet . . . perception goes on! Evidently the limited freedom contemplated in *Time and Free-Will* is not the all-pervasive freedom which is being invoked here. The freedom, then, not being ours, is it the spontaneity of the cerebral processes which is at work? These, like all natural processes, are certainly creative, aglow with novelty. But, again, must a novelty, emergent in or from them, express freedom, *i.e.* be of the type of those *special* voluntary processes which I label 'free'? I have tried to suggest elsewhere how novelty emerges in Nature, and this emergence is ordinarily, no doubt, as fatally determined as anything can be.[1] The point to be emphasised is that to create is not necessarily to create freely.

There is imperfect coherence between *Time and Free-Will* and *Matter and Memory* touching freedom as also touching the problem of Space.

Again, in what sense is it true that perception detaches from the 'totality of objects' the 'possible action of my body on them'? Is the 'totality' in question the entirety of objects—of the 'self-existent images'—constituting Nature? Or is it merely a name for the very limited sensible continuum which occupies my "circle" of experience and out of which, as Martineau among British thinkers showed so ably, are carved the objects and sensations which popular philosophy

[1] "Can be." I posit a spontaneity-side in all the "conditions" whose coming together issues in an event. *Cf. Individual and Reality*, pp. 156, 276-281.

has been prone to consider as if they came 'detached'. There is, in truth, never separation, but preferential attention, for even in analysis the continuum remains undivided and whole.

If we suppose that pure perception isolates its objects out of the entirety of Nature (which may comprise so much more than the familiar world explored by science), we are in the region of miracles. 'Images outrun perception'—indefinitely. Is the entirety of Nature present at every 'centre of indetermination' at which selection goes on? Such a view would ask too much from the genuine, but easily overstated, truths of 'interpenetration' and 'continuity'.

There is selection in perception. But is it not of aspects of the *limited* sensible continuum present in the cortex? And the selection, it may be suggested, is primarily made rather *for* us, than *by* us exercising our "freedom". The selective urgency proceeds, at the outset at any rate, from the cerebral processes themselves. Remember that we are no longer discussing the mechanical cerebral processes of the materialist or crude dualist. We are considering processes which are themselves psychical and which, in ordinary outward perception, visual and other, *we could only aware mediately and from the outside.* The esoteric life—the nuclear reality—of the cerebral processes, may comprise the very content of which, in perceiving, we are directly aware. And there exists an, at any rate, tolerable hypothesis as to why this content is relatively so limited in the regards both of variety and amount.[1]

What now of M. Bergson's belief that "in pure perception we are actually placed outside ourselves, we touch the reality of the object in an immediate intuition" (p. 84)—are *in things themselves?*

Of course, as Martineau, not without German inspiration, urged so admirably, perceived objects do not result from grouped 'sensations,' but imply dissociation; the carving out of things from a primitive continuum. And the objects in question are not inferred into externality, but are directly felt to be what they appear. The continuum is the first confused object and the attentions concern only its aspects. We aware, then, such objects just as they are—in the continuum. *But where does the continuum itself lie?* Surely it is part of the psychical life-content of the cortex, of that rich life which, for our very narrow human experience, is almost lost in the subconscious.—Now this cortical life is certainly continuous with the life of Nature which envelops it. And happenings in this enveloping Nature interpenetrate and colour cortex-happenings. Consequently, when I aware

[1] *Individual and Reality*, pp. 159-167.

directly the *shadow*-object called a 'tree,' I am *also* in a manner aware of the trans-cortical fact which casts the shadow — of the so-called thing-by-itself (which, like our workaday sun, must be held present *wherever its influence works*). On the other hand, I am not aware of the complete trans-cortical tree, and, in fact, part of the business of science consists in teaching me in symbols, often, it must be allowed, exceedingly poor, what this very complex tree is. This nuclear reality, which 'telepaths' multiple versions of itself in all directions, is part of that macrocosm, which, as I should urge, belongs to the Cosmic Imagination.

If, however, the nuclear reality, as archetypal, is not adequately known through its ectypes in human experience, there is justification for some form of the old belief in the thing-by-itself. But, after all, the thing-by-itself is only *more* of the same kind of thing that already we know sensibly. And it is the peculiar limitations of human existence (not an inherently unknowable character) which part the thing-by-itself from our present experience. The nuclear reality might be known entirely and directly—if I was, say, a superhuman of an exalted grade.

We reach, in fine, this result. The belief in Things-in-themselves is not wholly illusory. The 'self-existent image,' as M. Bergson would call it, is not the same as the 'image' of which I am aware and which exists only for my experience. But potentially, *i.e.* under conceivable novel conditions, it is knowable through and through. And, indeed, there may exist beings who include it, and even our phantasmal knowledges about it, in a direct experience.

If now we abandon the world of mechanical philosophers, we must hold steadfastly to our decision. Thus the brain, if it be a psychical complex in a psychical Nature, cannot be such that "it adds nothing to what it receives" (p. 19). Nothing can announce itself in the cerebral region without being altered thereby.[1] Further, though we have to accept continuity and penetration as characterising Nature, we must recall also that between the cortex and other 'self-existent images' there may exist distorting media which alter what they convey. Even within a psychical macrocosm we may be confronting objects in great measure peculiar to our circles of experience.

[1] Even in the case of light which must qualify the macrocosm as well as the objects which I perceive, we have according to M. Bergson "contractions" to bear in mind. And these contractions introduce "more differentiated moments" into the "diluted" events which they contract. *Cf.* p. 275.

How, now, are we to use M. Bergson's views in the regard of *Dualism?* What precisely is the character of the alliance between Spirit and Brain? Is there a monad which "selects" the perceived presentations, and, if so, what is its relation to the cerebral processes which, as now re-interpreted, are found to be psychical themselves? Does the monad "detach" objects actively, or is it just the process of "detachment" hypostatised? Are we not, in this treatment of perception, driven back on all the difficulties about the soul which beset Lotze? Much will be heard later of Spirit in connexion with Memory, but Spirit must first have presentations before it can recall them, and we want to know how, if dualistically conceived, the partnership of Spirit and brain works?

Later, however, we have the statement "that the humblest function of spirit is to bind together the successive moments of the durations of things" (p. 295), by which act it comes into contact with matter [Nature?] and is first distinguished from matter. This binding, even in respect of concrete perception, implies memory. "In concrete perception memory intervenes, and the subjectivity of sensible qualities is due precisely to the fact that our consciousness, *which begins by being only memory*, prolongs a plurality of moments into each other *contracting* them into a single intuition" (p. 292). It is not shown, however, how Spirit comes into contact with "matter," so that "the plurality of moments" is felt in its consciousness at all. If its work at first is to "contract," it must get a grip on the data to be contracted. And its relation to brain-action, in respect of the grip, remains quite obscure.

Again, in respect of the "contractions" which condense an indefinite multiplicity of events, *e.g.*, in the sensible quality "red," is it necessary to appeal to Spirit? Does Spirit work unconsciously or consciously in thus condensing sense data for insect and man? If unconsciously, could not the unconscious nervous processes do the work equally well? And, if consciously, does this gifted oversoul work *simultaneously* with the phenomenal consciousness of bee, black-beetle, or man? Is it conscious alike of the plurality to be contracted and of the contraction which it is able to effect? Note that Spirit is not enjoying any sinecure. At first it was useful just to 'detach' objects from the 'totality of objects,' but now it has, also, to "contract," and thus, in a manner, to create, that which is to be detached. And while thus "contracting" natural events into qualities, and so far *altering them*,[1] it has also to place us as percipients in the

[1] "To perceive consists in condensing enormous periods of an infinitely diluted existence into a few more differentiated moments of an intenser life" (p. 275).

actual presence of the contracted events themselves.[1] Is it not being asked to do a little too much?

A fundamental difference, according to M. Bergson, between perception and *affection* is that the one is outside, the other within my body. The organism does not merely reflect action received from without—it absorbs also a part of it. When, for instance, this absorbed action damages a sensitive element, there arises pain which is felt where it happens.[2] "Pain is nothing but the effort of the damaged element to set things right—a kind of motor tendency in a sensory nerve. Every pain, then, must consist in an effort,—an effort which is doomed to be unavailing . . . a *local* effort" (p. 56). Do we gain enough, however, by labelling pains in this way as 'efforts'? What definition of effort has the writer in mind? Granting (as I agree) that there is truth in the absorption theory and in that of the local struggle [as notified to the cortex], is the peculiar speciality of pain sufficiently understood? Perhaps there is no better account to be given than that which describes pain as a feeling of thwarted life. But the attempt to connect this account with the behaviour of nerve-tissue would require a fuller theory of Nature than the one M. Bergson formulates in this book. We should have to leave the shelter of general assertions respecting 'penetration' and 'continuity' and descend into detail—into the depths where the *minor psychical centres*, which make Nature discrete as well as continuous, struggle and interact.

In later portions of the work M. Bergson rejects the crude atomistic realism which sees in "matter" a composite made up of more or less independent extended parts as unlike spirit as conceptual ingenuity can make them. He endeavours to tone down the familiar contrast of Spirit and Nature, and, getting rid of the absurdly artificial world of realism and mathematical symbology, finds that "the material universe itself, defined as the totality of images, is a kind of consciousness, a consciousness in which everything compensates and neutralises everything else, a consciousness of which all the potential parts, balancing each other by a reaction which is always equal to the action, reciprocally hinder each other from standing out". Spirit also on its side is made to approach this Nature. In *Time and Free-Will*, as we shall recall, "sensations," "feelings," "passions," "efforts," etc., are treated as "inextensive," and, consequently, not to be discussed as quantities. But in *Matter and Memory* a truer

[1] "My consciousness of matter is not subjective, for it is in things rather than in me" (p. 306).

[2] Even when felt in the toe of an amputated leg!

view is advanced. "We must make up our minds to it. Sensation is, in its essence, extended and localised."[1] "My actual sensations occupy definite portions of the surface of my body."[2] "Material extensity is not, cannot any longer be, that composite extensity which is considered in geometry; it indeed resembles rather the undivided extension of our own representation,"[3] and so forth. It is true that Bergson still regards *pure* memory as unextended, but only so long as it is not "actualised in an image".[4] The memory-images with which ordinary introspection deals are extended. Obviously Spirit and Nature—from whose wealth perception merely extracts its own—have come very close together, and the puzzle why M. Bergson has elected to be a dualist will recur. This consideration brings us to a brief notice of his views on "Memory". If the shadowy dualism, now alone possible, is to be defended, a barrier not of degree, but of kind, must be erected between pure Perception and memory, on the side of which Spirit shows its distinctive character.

Two forms of Memory are discussed—one embodied in "motor mechanisms," the other in recollections which are not dependent on the integrity of the brain. The one is akin to bodily habit and *acts* rather than *re*-presents the past. And the recognition effected by it lies in consciousness of a special attitude adopted by the body, as in the case of a dog greeting his master (p. 93) where the perception mechanically calls a familiar attitude into being. The other form of Memory "records, in the form of memory-images, all the events of our daily life as they occur in time"; it conserves the past integrally with *all its dates and detail* "regardless of utility or practical application". Recognition, effected by this memory, is "intellectual"—the image which emerges from virtuality in the sub-conscious coalescing with the object to which attention is drawn. "In it we take refuge every time that, in the search for a particular image, we remount the slope of our past" (p. 92). This is the true imaginative, as opposed to the repeating or mechanical memory. Brain lesions merely prevent it from "actualising" images which fuse with sensation and so take on spatial forms as revealed to introspection.

No one is aware directly and always of this integrally conserved past. Accordingly, there is resort to the hypothesis of 'internal unconscious states'. Consequently we have to take note that the Intuitionist method, pure and simple, fails

[1] P. 180. [2] P. 179. [3] P. 237. [4] P. 181.

at this point. It must be supplemented, as I have urged already, by circuitous inference. A similar necessity marks the belief, also espoused by M. Bergson, in unperceived "material" objects.

The first criticism which I offer is that M. Bergson, in contrasting these two forms of memory, makes the motor or habit-memory *too* mechanical. He contends that "*no trace of an image can remain in the substance of the brain*" (p. 164). Now no one need take seriously the crude physiologists' ways of discussing images as "slumbering, whether as a physico-chemical modification of certain cells or under some other form" (p. 146), and so forth. There are no barely physico-chemical processes in Nature; the category of thinking applied is too inadequate for the facts. And in disposing of belief in the mechanical Nature set up by atomistic realism, in moving towards panpsychism,[1] M. Bergson ought to have got beyond the interpretation of the habit-memory which he now supports. Is he haunted by the ghosts of defunct mechanical hypotheses? Why cannot the brain retain or reproduce memory-images in some form—nay, *consist* inwardly and in part of these? All nature-processes, including, of course, neuroses, are psychical in character. Doubtless there are aspects of Memory which can be discussed *as if* they are "mechanical," but these same aspects, if we are concerned with truth and not with merely "practical" expositions, must be regarded in a more adequate way. Take the case, just cited, of the dog who greets his master. And allow that the perception evokes a familiar "attitude" of the body. You will have to concede that this attitude characterises a body itself psychical and that, accordingly, the brain must consist of contents akin to the very memory-images which M. Bergson excludes!

The habit-memory, in short, presupposes images just as much as does the other; there remains, however, the inquiry as to whether these images are "stored" or reproduced only on call. Here we take note of that "cerebral memory" which, in a former work, I contrasted with a "spiritual memory" in potency which is independent of brain and "in which both perceptions and ideas are upheld just as they were originally given".[2] The images of the habit-memory

[1] "No doubt also the material universe itself, defined as the totality of images, is a kind of consciousness" (p. 313).

[2] *Cf.* my *ballon d'essai, The Riddle of the Universe* (1893, p. 356). I referred, like M. Bergson, to the experiences of persons dying or in trances as attesting its reality. Here also lie the memories of former earth-lives, all educible, perhaps, at some future stage of our evolution.

are often inconspicuous or seemingly absent, but that may be only because the economy of life tends to thrust them below the conscious level. Such absence, as M. Bergson would be able to admit, may be presence in the realm of the sub-conscious—a presence which helps to determine why the habits of the brain are just what they are.

But the main interest lies for the present less with Bergson's motor or habit-memory than with the "recollections" of the "spontaneous" or imaginative memory. It is impracticable to attempt here a *précis* of the interesting researches to be found in *Matter and Memory*—the discussion is a many-sided one and must be studied at first hand. Of vital significance, however, seems the contention that this second memory is independent of the brain and that the facts of 'cerebral localisation' in no way invalidate, but rather bear out, this view.[1] "The alleged destruction of memories by an injury to the brain is but a break in the continuous progress by which they actualise themselves."[2] But, if we are to concede the independence, how are we to think about the working, of this spontaneous memory? The reply is that complete perception "is only defined and distinguished by its coalescence with a memory-image which we send forth to meet it. Only thus is attention secured. . . . But on the other hand . . . the memory-image, if it remained pure memory, would be ineffectual. Virtual, this memory can only become actual by means of the perception which attracts it. Powerless, it borrows life and strength from the present sensation in which it is materialised. Does not this amount to saying that distinct perception is brought about by two opposite currents, of which the one centripetal, comes from the external object, and the other, centrifugal, has for its point of departure that which we term 'pure memory'? The first current, alone, would only give a passive perception with the mechanical reactions which accompany it. The second, left to itself, tends to give a recollection that is actualised—more and more actual as the current becomes more marked. Together these two currents make up at their point of confluence, the perception that is distinct and recognised."[3]

The recollection which is "attracted" by a perception and just completes it comes into the present, I gather, in a spontaneous way. But suppose that we are interested in

[1] *Matter and Memory*, p. 160.

[2] *Ibid.*, 131-162, for a most able discussion of the bearing of the 'cerebral localisation' facts on the question of memory.

[3] Pp. 162-163.

a recollection for its own sake. In this case "we become conscious of an act *sui generis* by which we detach ourselves from the present in order to replace ourselves, first in the past in general, then in a certain region of the past. . . . But our recollection still remains virtual; we simply prepare ourselves to receive it by adopting the appropriate attitude. Little by little it comes into view like a condensing cloud; and as its outlines become more distinct and its surface takes on colour, it tends to imitate perception. But it remains attached to the past by its deepest roots, and if, when once realised, it did not retain something of its original virtuality, if, being a present state, it were not also something which stands out distinct from the present, we should never know it for a memory."[1] The home of the emergent recollection is 'pure memory' which lies in the sub-conscious, unattached to the present, unextended. Pure memory is powerless "as long as it remains without utility". The result of the 'condensation,' the recollected image, "is a present state and its sole share in the past is the memory whence it arose". It is sensational and extended. It is one of those things which are "being made," as contrasted with past things which are "*made*" (*cf.* p. 193). In so far as my "sensori-motor present" requires, in a practical reference, the illumination derivable from past experience, pure memory is condensed into guiding images. Movements mark out the field of possible action and thereby determine what images are to be condensed. Useless memories are inhibited by the present attitude of the body which attracts only what lights action and leaves all else merely virtual in the night of the unconscious.

There is much in the above-cited account which requires comment. How, for example, does a percept 'attract' a memory-image? For 'attraction,' if we are not playing with metaphor, presupposes a lessening of (or *nisus* to lessen) spatial remoteness, and memory, while virtual or 'pure,' is not supposed to be extended and juxtaposed with present existences at all! How is the merely virtual, which no longer acts, provoked into the form of an image? The difficulty is formidable. Elsewhere there are passages which represent the *body* as taking up an "attitude" towards an object which may "*call back* its memory-image" (p. 120) or —ought we not rather to say?—may provoke the pure memory to *actualise* this image. But how can the *body* succeed, unless somehow it contains the percept? We did

[1] P. 171.

not understand how a *percept* can be said to 'attract' a virtual image, but we shall be utterly at a loss to conceive how the body, which does not contain the percept, can do so! Recall that we are told that "no trace of an image can remain in the substance of the brain" (p. 164). If there were a "trace" present in a subordinate *cerebral memory*, a way might lie open to the deeper memory; an image therein (if it be that images are preserved there integrally) rising once more to the conscious level as the "trace," growing intense, furthered it.[1] But a bare mechanical attitude is out of touch with the hypothetical sub-conscious images and *a fortiori* with a merely virtual memory.

A part-source of this confusion is near to seek. M. Bergson has not allowed panpsychism to permeate thoroughly his thinking. Although in one passage he declares that the 'material universe' is a kind of consciousness, he assumes, nevertheless, that the cortex contains movements indeed, but no imagery. But since the cortex is part of the 'material universe,' it is surely, like this, psychical in character. And like other 'material' objects, it must have an inward as well as an outward side (as perceived). It may possess an inward aspect where lie contents such as memories. No *mere* movements happen within it—rather qualitative content-changes which are more than, but include, spatial re-arrangement. It must be treated as 'eject' as well as object. If so, it is a field in which images can be either stored or reproduced. And we have to ask to what extent this subordinate cerebral memory enters into our voluntary life and how it is allied with that deeper memory in which M. Bergson and I alike believe.

The other part-source of the confusion is the contention that the deeper memory must needs be "virtual". "Virtual" can only mean that it is such that, under conditions *not always complete*, it can become spatial and sensational, etc. The trouble is that these conditions cannot be completed! Not from the side of the percept or body, as we have just seen. And not from the side of the pure memory. For the pure memory is a "*made thing*" which belongs to the past and "the past is essentially that which *acts no longer*" (p. 74). Theoretically, then, the pure memory can do nothing whatever. But you will find, nevertheless, in following M. Bergson's oscillatory thought, that it rises from its decreed trance to do a good deal, *e.g.* when he rings it up for a spell

[1] A prenatal memory might emerge in this way. *Cf. Individual and Reality*, p. 355.

of "spontaneous" work or when our past indwelling in our characters is found to influence each and all of our present acts.

There is another way of discussing a 'spiritual memory,' on which, however, I cannot dwell now. Suffice it to suggest that memories which are sub-conscious, and independent of the brain, need not, for that, be non-spatial. If memory-images, as directly known, are spatial, why not the inferred sub-conscious memories as well?[1] Such memories may be allied with a superphysical organism just as the vaguely defined cerebral memory is with the life of our familiar body.[2] Take note here, that if you want to preserve memories, as does Bergson, *integrally*, with dates and details complete, you must suppose them persisting as concrete images, or rather as an image-continuum (for we require no floating ideas)—you must not banish them to a mystical realm of 'virtuality' in which they are non-spatial, non-sensational and indeed quite transformed. But I cannot do more than indicate such contentions now.

Verily Intuitionism has to be supplemented freely with inference. How little we know or, at present, can know by direct vision!

When M. Bergson says that in recalling the past I "replace" myself in it, am I to take his words literally? For the actualised images, at any rate, are present facts and the 'pure' memories, whence they emerge, are not confronted at all. And even if they were confronted, they would not resemble the lapsed primary realities for which memories are supposed to stand. The watch which I owned twenty years ago and which is no longer part of the 'material world,' is not mirrored faithfully even in 'pure memory,' for the virtuality of the watch-image is neither spatial nor sensational, is a sort of novel mental Thing-in-Itself. How, then, do I place myself in the past? Well, I have a direct awareness of a past in the 'specious present,' and I can date certain images, in whatever way I explain their coming, in this direction. But these images do not resurrect what once was—at most they are continuous with certain of my gleanings from it. The watch itself has vanished; and even the watch memory I confront now is not a mere reinstatement of the original memory. It is a continuation

[1] "Non-perceived material objects," which are spatial, have to be imagined as a kind of "unconscious mental state" (p. 183). Hence M. Bergson will find no difficulty in imagining spatial unconscious memories.

[2] *Cf. Individual and Reality*, pp. 336-340, and elsewhere.

of it, but this continuation, though considerably modified, prolongs the original memory in time. Just as *in space* the sun can be said to be present wherever its influence is felt, —even though the nuclear orb is far away,—so *in time* the watch is present in the first memory of it and through the first memory in the last memory. Thus in recalling a memory, however derived, I am in a manner continuous with its remote primitive object—I am, at the same time, both aloof from and in touch with the past. There is a more formidable riddle to be solved when we come to ask why memory, which is not merely an endowment of conscious life, should occur at all. I shall deal with this basic riddle in the course of penning my new work.

The foundations of the new dualism are now laid bare. The radical distinction between Spirit and Nature must, according to M. Bergson, be stated in terms of *time*. And the dividing line is found in his Memory. "We can understand that spirit can rest upon matter and consequently unite with it in the act of pure perception . . . it is distinct from matter in that it is, even then, *memory*, that is to say a synthesis of past and present with a view to the future, in that it contracts the moments of this matter in order to use them and to manifest itself by actions which are the final aim of its union with the body,"[1] and anon "if, in fact, the humblest function of spirit is to bind together the successive moments of the duration of things, if it is by this that it comes into contact with matter and by this also that it is first of all distinguished from matter, we can conceive an infinite number of degrees between matter and fully developed spirit—a spirit capable of action which is not only undetermined, but also reasonable and reflective. Each of these successive degrees, which measures a growing intensity of life, corresponds to a higher tension of duration and is made manifest externally by a greater development of the sensori-motor system."[2]

The hypothesis of the 'virtual' memory is not, I have endeavoured to show, satisfactory. I have now to take note of a further and most formidable difficulty.

"Spirit borrows from matter the perceptions on which it feeds."[3] Prior, then, to the 'union with the body' there is no virtual memory, since no perceptions drawn from "matter" have gone to constitute it! What, then, is this "unfed" and memory-less Spirit which comes to body? Here is a novel Thing-in-Itself which is characterless. It

[1] *Matter and Memory*, p. 294. [2] *Ibid.*, pp. 295-296. [3] P. 332.

'contracts'—it 'detaches'—it creates ever-novel phases of 'tension'. But all this activity is subsequent to the union with the body. And I am unable to discern either what is working or how precisely the work is being done.

I have no space in which to dwell on what I believe to be the exaggerated importance attached to motor response in this work. Motor activity is, after all, only a department of our larger activities and it is far from clear that even perceptions are always harnessed to adaptive movements.[1] On the higher æsthetic and intellectual levels conscious activities may show only incidental relations to motor reponses and often none at all. Nothing could be more misleading than to bring all my spiritual life into the business of moving about the body or parts of it.

I have not discussed M. Bergson's accounts of general ideas, association, the different planes of consciousness, and much else. My criticism has concerned only fundamental difficulties which a work, admirable in point of style and interest, has suggested.

[1] My perceptions of drowsiness on awaking, for instance. Hours of this experience may leave me a merely cognitive consciousness.

V.—DISCUSSIONS.

THOUGHT AND ITS FUNCTION.

In a discriminative and courteous review of *Pragmatism and Its Critics* (Mind, N.S., 80) Mr. Murray finds the theory of knowledge there set forth more "sublimely audacious" than convincing. Its "audacity" consists, according to Mr. Murray, in attempts (1) to exclude representation from the process of knowledge; (2) to eliminate or ignore the distinction between the physical and the psychical; (3) to get rid of "the transcendent element in knowledge". Each of these points, of course, involves the others, the last especially being at the bottom of the other two.

Looking up the passages in the volume under review, in which the "representative" theory of knowledge is discussed, they seem to be, so far as I have found, to the effect that thought is not "merely" or "only," nor "primarily" representative; that whatever representative character thought has, is but a part of the technique of its general function, which is to help to maintain or alter or develop experiences of direct and immediate value. There *is* an elimination of the representative character of thought in the "mirroring," "photographic" sense in which Mr. Murray takes it. Of this more farther on. But if representation be taken in the sense of "pointing at," "leading to," and if it be conceded that this "pointing" and "leading" constitutes an alteration of the previous status of the things concerned, there is, as doubtless Mr. Murray would concede, no elimination of representation.

On the second count it must also be confessed that there is an elimination of the *kind* of distinction between the physical and the psychical which Mr. Murray makes. Mr. Murray finds in the view he is criticising an attempt to establish a continuity between thinking and such activities as "reaching," "biting," etc., which he thinks amounts to a reduction of thought to physical terms (p. 569). Here Mr. Murray obviously assumes that thought is purely "psychical" and that "reaching" and "biting" are purely "physical". But the rejection of precisely this assumption is a fundamental position of the standpoint which Mr. Murray is criticising. It equally rejects the idealist reduction of such actions as reaching, etc., to "psychical matters of fact". For Pragmatism, the problem of knowledge is concerned primarily

—not with the relation between the two metaphysical worlds of the physical and the psychical, but with the relation between immediately experienced things and values and the reconstruction of these through reflexion. These directly experienced things and values are as little purely "physical" as thought is purely "psychical".[1]

Facing the issue squarely, would Mr. Murray be willing to describe reaching, biting, etc., as "purely physical"? May not such activities, from a certain standpoint, be interpreted as just as much "psychical," if not in the same way, as thought? On the other hand, is thought in its first intention (*i.e.*, as a way of dealing with things, not thought dealing with thought) experienced as something purely psychical? If the reply be that neither reaching nor thought can be *described* at all except in a psychological reflexion, still we shall find in this appeal to psychology little support for a metaphysical distinction between physical and psychical. For a psychological statement of reaching includes such terms as sensation, impulse, pleasure and pain, just as its account of thought includes "motor strains," "localisation," etc. Meanwhile, if we insist on equating thought with "the psychical," and such experiences as reaching with "the physical," how are we to escape "the old and tiresome epistemological problem," the futility of which Mr. Murray seems at times fully to appreciate (pp. 567-568)?

"If a physical metaphor for thought must be used," says Mr. Murray, "it resembles much more the relation between a camera and the scene it photographs than the relation between stimulus and response." It is difficult to read such passages as this and avoid the conviction that at the bottom of much realistic criticism of Pragmatism is not only a psycho-physical, but a visio-spatial epistemology. Perhaps one of the simplest ways of meeting this is to substitute a case of visionless judgment. Suppose, in an instance where there has never been vision, an odour "means," "points," "leads" to experiences of touch, taste, etc., called "orange". How appropriate is the mirror-photograph metaphor here? Does the odour photograph the taste?

On the question of the kind of change effected by thought, Mr. Murray says (p. 569): "To know is as distinct from changing as reaching is from biting". Enormously more so, it should be said, if knowing is purely "psychical," and reaching is purely "physical". On the other hand, if such a statement intends to concede that there is as *much* continuity and likeness between thought and change as between reaching and biting, any Pragmatist ought to be satisfied.

[1] *The Definition of the Psychical*, by my colleague Prof. G. H. Mead, in the decennial publications of the University of Chicago, will be found very relevant and illuminating to the entire current discussion—especially to the issue between realists and anti-realists.

Continuing the subject of change Mr. Murray says: "The judgment, 'there is a sandwich on the sideboard,' prescinds in intention, being interpreted as making any change in the sandwich". Does it so "prescind," any *more* than does reaching for it or biting it? Doubtless any process of change requires resistance and continuity (in this sense identity) in its material. There obviously could be no change if *any* change whatever meant annihilation or complete transformation of the material involved. Would Mr. Murray concede that identity is consistent with *some* change? If so, is not such identity all that judgment, or any other act, requires? Why should thought demand any more rigid identity in its material than reaching does in the thing reached for?

However, when it is said: "thought makes no change in the material undergoing judgment," perhaps what is meant is that any specific judgment doesn't change its *own* meaning, that is, its own act; just as reaching or pulling, while producing changes, are not at the same time something else, though obviously these also run their course and lead into something else. If this be what is meant, I cheerfully subscribe. But this is far from saying that thought effects *no* change in the things thought of. Doubtless also, the change which thought makes, and intends to make, precludes in intention any *other* changes that *would interfere with the change it is making*, just as reaching precludes in intention other changes that would make reaching impossible.

Mr. Murray's attempt (p. 570) at a *reductio ad absurdum* of the view that thought effects alteration in things, again rests upon the assumption that the change which thought makes in things must be identical with the changes involved in thought itself as it goes on. But this hardly follows. Whether an object is judged to be a wax figure or my friend Smith, using Mr. Murray's illustration, may well make a difference to the object as well as to the one judging, without the difference being that of changing from wax to Smith or from Smith to wax. If when I tell Smith he is a hero, Smith grows red, and when I tell him he is a coward he becomes white, are we to say that the change from red to white is identical with the difference between the words "hero" and "coward"? I am of course aware that all this assumption of continuity between thought and such actions as reaching, speaking, etc., is precisely one of the points challenged by the reviewer. But that challenge, as I have already pointed out, rests upon the conception of reaching, etc., as purely "physical" and thought as purely "psychical"—a conception which pragmatism utterly rejects.

After finding most of the review, and indeed the immediately preceding paragraph, devoted to a refutation of the position that knowledge is a real alternative interaction between beings, "a form of stimulus and response," etc., one is a little surprised, not to say

amazed, to see the last page of the review open with the statement: "The Chicago Pragmatists have been accused of solipsism *because* they have *thus* sought to eliminate the transcendent element in knowledge and to explain the connective function entirely in terms of the knower's experience" (italics mine). Probably the term "because" and "thus" in this statement are meant to refer only to the supposed elimination of transcendence in general. But if "thus" refers to the *way* in which "The Chicago Pragmatists" have eliminated transcendence it is difficult to see how they are to be accused of solipsism "because" they have "thus" eliminated transcendence; "thus," *i.e. by* making thought a factor in real alternative (even "physical" according to Mr. Murray) activity. "Materialism" instead of "solipsism" would be a charge much more in accord with the reviewer's previous criticism of pragmatism, though equally far from the fact.

The Pragmatist's appeal to the social character of immediate unreflective experience the reviewer thinks is "sheer paralogism"; the paralogism being that it begs the whole problem of knowledge. "The repeated disclaimer, we do not believe in a private consciousness," says Mr. Murray, "can hardly be accepted as an *a priori* solution of the problem of knowledge." Again, and finally: "Inasmuch as it is possible actually to doubt whether experiences other than my own exist, the logician must show how he arrives at his disbelief in the privacy of consciousness" (p. 570).

When a discussion reaches the point where each side accuses the other of begging, this indicates that there is disagreement about what the problem really is, and this means in turn that there is disagreement about the data, the "matters of fact". And such is clearly the case here. No Pragmatist finds it any more possible "actually to doubt" the existence of other beings than himself than to doubt his own existence. And if the test of "actually" has some connexion with conduct, he is hard of faith regarding the "actuality" of this doubt in others—except possibly in pathological cases. In the history of philosophy, this doubt is never the starting point of reflexion. It is a methodological assumption *in* reflexion; and judging from results, not a very successful one. Its chief function seems to have been to keep "the old and tiresome epistemological problem" going. Assume, with Descartes, such a doubt, can "the logician," in Mr. Murray's terms, cure it? The record of the attempts does not appear very encouraging. Witness the "logic" of Descartes' attempt in his Third Meditation, and the "logic" of the various subsequent solutions *via* pre-established harmony. What more eloquent testimony to the utter futility of trying to deduce existence of other beings from one's own existence as the sole datum? And note that there can be no appeal here to induction, as against pure deduction; for by the assumption no fresh data can come in. Hence the begging to

which "the logician" is inevitably forced in his solutions; hence the well-worn saws: "the only escape from solipsism is not to get into it"; "at the entrance to the cave of Solipsism all tracks point one way," etc. Hence also the Pragmatist's refusal to accept a statement of the problem of knowledge as one which starts with "my own existence" as the *sole* datum. In a sense this does "beg". It "begs" to be excused from embarking on an epistemological enterprise foredoomed to failure. But it does not beg in the sense that it first *agrees* that the problem of knowledge is the problem of solipsism and then begs it in the process of solution. It is precisely because he sees that if he did so state the problem of knowledge, he would as a "logician" have to beg the solution that the Pragmatist refused to start with solipsistic statement of the problem. And if by an "*a priori* solution" we should mean a "solution" by conceptions which steer clear of insoluble difficulties and which are "workable" in science and social intercourse, this "solution" might even be rather *a priori*.

In view of this interpretation of the difficulties Mr. Murray has encountered in my book, I fear that it neither claims nor possesses the "sublime audacity" which he has ascribed to it.

The apparent inconsistency, to which Mr. Murray calls attention (pp. 80, 81), of the volume reviewed, is due to bad proof-reading which failed to delete the prefix "in" before the word "significant".

Addison W. Moore.

DR. ALEXANDER AND THE *A PRIORI*.

Dr. Alexander, in the course of his remarks on the origin of *a priori* ideas, says that Spencer's version presents us with a biological improbability. He also says: "The Spencerian attempt to trace these categories to the accumulation of experience which does not originally contain them, to regard them as acquired in the history of the race, however much they may be original to the individual, appears to have against it biological principle, even if we can anyhow understand how for instance a combination of visual and motor experience, inherited through no matter how many generations, could come in the end to *feel* like space".

I ask the courtesy of your columns to make and substantiate two criticisms on the passage quoted above: (1) That Dr. Alexander is repeating a misconception of Spencer's work which has already been corrected, and is, in other ways, attempting to advance the subject while ignoring literature on it both relevant, and, as yet, unanswered. (2) That he is confusing two different problems and attributing to Spencer an intention, and a confusion, which is certainly not his.

Let us take the second point first. If Dr. Alexander is attempting to explain why anything feels, as it does feel, I, for one, shall listen to him with respectful attention. But why should he include a discussion of the *a priori*, and a criticism of Spencer, which is irrelevant and mistaken. How does space feel? The point is that, for the purpose of attempting to explain a problem of this kind, it does not matter whether an idea is *a priori* or not. There is nothing more empirical than, shall we say, a drop of boiling water falling on the hand. But it is certainly *a priori* to the individual that the scald of that water feels, as it does feel. It is, as we might put it, inherent in our constitution. And the metaphysical (if it is metaphysical) problem of transferring from outside existence to personal sensation is quite independent of the fact that we have (or have not) of certain forms of existence, certain *a priori* ideas. Immediately we admit, as Dr. Alexander admits on his first page, the duality of the "two things compresent," *i.e.* an external existence in any way corresponding to our *a priori* notions, the problem of "explaining" how these ideas present themselves, as they do, has no longer any special significance. The problem existed for Kant only because he, so far as I understand him, denied the duality which Dr. Alexander admits. Space and time were, to him, but the intuitional form imposed by the human mind on external existence.

To turn now to Dr. Alexander's criticism of Spencer. He says that Spencer's evolutionary empiricism appears to have against it biological principle. But he does not say what biological principle. It is not possible to argue the whole question in a brief discussion. It is therefore necessary for me to point out that I have already treated the matter in this journal (No. 73), and that to attempt to answer him in full would be but to repeat the arguments I have stated. Why does not Dr. Alexander, if he thinks it necessary to refer to the matter, do me the honour to attempt to answer the arguments there put forward. It might be well, however, to add a few remarks concerning the alleged biological improbability.

Dr. Alexander probably means (though he does not say so) that Spencer's theory implies the specific inheritance of acquired characters, a form of inheritance which a large section of biologists refuse to admit. But, in that opinion (if he holds it), he is, as I have already pointed out, mistaken. Spencer certainly *did* strongly uphold the specific inheritance of acquired characters, and he *was* the author of the theory of evolutionary empiricism, and it *is* true that the first of these theories, if admissible, will *help* the second, but, at this point, the connection ends. There is, on the neo-Darwinian hypothesis, a biological difficulty involved, but no biological principle, as Dr. Alexander will, I am sure, admit, if he will look at the matter more closely. Let us, to simplify the problem, consider the case of an amœba. Thrusting pseudopodia sideways obtains new nutriment and assists survival. Thrusting pseudopodia upwards would, as a rule, be a futile waste of energy. Now let us assume sensation in the amœba. We can readily understand how, *by natural selection alone*, upwards would come to *feel* different from sideways. We may say that such a feeling would be *a priori* to the original amœba.[1]

When we come to the higher organisms, and particularly man, we are met with the biological *difficulty* that, when there are so many different factors tending to survival, we cannot readily see how any particular factor, especially one so subtle as the nature of *a priori* ideas (in those cases when clear ideas of any degree of complexity have been isolated at all), can be disentangled. There is no doubt about the survival value, but we find it difficult to realise, or to admit, that such a minute drift, in such a vast entanglement, can, as we might express it, "sort itself out". Thus the acceptance of the neo-Lamarckian view in biology, which, as Dr. Alexander is probably aware, is still an arguable view, greatly

[1] The biological reader will, I am sure, for the purposes of illustration, allow me to disregard the fact, which, needless to say, I am quite aware would be very relevant if it were more than an illustration, that the amœba propagates, as a rule, by budding, and that, therefore, the biological problem of inheritance assumes a different aspect. An illustration, equally simple and equally relevant, could, no doubt, if it were worth the research, be found in the life history of the simpler polyzoa, which have acquired the habit of sexual propagation.

increases the probability of the Spencerian theory. But there is, on any hypothesis, no question of biological *principle*.

These remarks, in extension of what I have already said, may, perhaps, put the matter in a clearer light, and that is all that is possible or desirable on the present occasion. If Dr. Alexander will refer to Spencer specifically and in detail, I shall know how to answer him. If he will do me the honour to refer to my article on the subject which focuses, what, so far as I understand him, Spencer has, in effect, said in various parts of his published work, he will thereby save himself considerable labour. I hope, however, I have said sufficient to make it clear that the current view of Spencer's theory, which he repeats in his article, is a misconception.

H. S. SHELTON.

VI.—CRITICAL NOTICES.

Platonica. By H. Richards. London: Grant Richards, Ltd., 1911. Pp. viii, 356.

As Mind is not professionally a philological journal, it hardly falls within my province here to discuss the merits of the merely textual corrections Mr. Richards proposes to make in Plato and the other authors (Epictetus, M. Aurelius, Laertius Diogenes, the *Violetum* of Arsenius) with whom he deals. I may say, however, that the vast mass of the conjectures on Plato, which fill roughly three-fourths of the volume, are discounted, to my own mind, by the author's failure to recognise the special conditions which make the textual tradition in Plato so much better than that which exists for any other great classical writer. The care with which our best Plato MSS.—or rather their ultimate archetypes—have been corrected is notorious. The evidence of papyri going back far into the second century B.C. exhibit, as the current text of the book-markets of *c.* 150, one so much inferior that it can hardly be doubted that the text of the great MSS. comes in the end from officially made and guarded texts. The best explanation of the existence of these texts is that the Academy itself had a continuous official existence from its foundation until the "disestablishment and disendowment" measure of Justinian. Hence I feel bound to regard many of Mr. Richards's proposals as mere attempts to improve on the Greek of Plato himself.

A fair number of the explanatory notes contain interesting suggestions, but they too are often vitiated by the creation of gratuitous difficulties. I may note just one example of a difficulty which Mr. Richards says was suggested to him by a pupil (and indeed it savours of a certain undergraduate thoughtlessness). It is alleged that in laying down the marriage regulations of *Rep.*, v., Socrates has got himself into an intolerably absurd position. He has forbidden any man to marry a woman more than thirty years older or younger than himself, because she must be either his "mother" or his "daughter". Next, according to Mr. Richards's interpretation of 461 D no man may marry a woman less than thirty years older or younger than himself, because a woman born ἐν ἐκείνῳ τῷ χρόνῳ ἐν ᾧ αἱ μητέρες καὶ οἱ πατέρες αὐτῶν ἐγέννων must be his sister, and Mr. Richards takes the "time" referred to to be the whole of

the thirty years in which the man's "fathers" were liable to be called on to beget children. Hence, if Plato had not gone on to insert a provision that you may marry your sister "if the lot falls out so and the Pythia adds her consent," no marriages would have been possible at all. What Plato speaks of as if it were an exceptional case must be the only possible case; all marriages must be between "brothers" and "sisters" (as defined by Socrates), and the consent of the Pythia must be a mere formality regularly given for all cases at each nuptial festival. That this is not Plato's meaning, and that the common interpretation is substantially right is surely proved by the provision that my "brothers and sisters" are the offspring of those who were united seven or ten months before my own birth (see the definition of "parents" in 461 D). If Plato meant that the *whole* of one generation are brothers and sisters, and the *whole* of the previous generation their parents, this reference to the months in which a child can be born alive would be purely superfluous. A further odd result is that, to get Mr. Richards's result out of Plato's words, you must suppose that *all* the persons of marriageable years are actually married at every festival. Since every woman who conceives on such an occasion must be allowed at any rate a year to bear her child and be fit to be paired again, it would follow that the marriages can only take place, at the most, once in the year, and that all the babies (except the seven months' ones) are born in the same month. Where then do the extra wet-nurses of 460 D come from, and can we suppose Plato to have made his Amazons incapable of discharging their public duties all at the same season? But if the festivals happen more than once a year there will always be persons of the same generation with myself who are not my "sisters," and with whom I may therefore marry, and the case of marrying a "sister" will be, as Plato assumes, an exception to the rule. (Incidentally, I may add, as against various commentators, Plato's arrangement does *not* allow of what *we* call incest, since if "all persons born in the tenth or in the seventh month from the day when a man or woman is wedded, are to call all the persons wedded on that day "parents," it clearly follows that all my blood brothers and sisters will be also my brothers and sisters by the new definition, and the prohibition of marriage will thus include all that we call incest and a great deal more.)

From the philosophical point of view the most important part of the book is the long polemic against the authenticity of the *Epistles*. Vigorous as Mr. Richards's language about the Platonic correspondence is, I can find no real worth in any of his arguments, and some of them are demonstrably absurd, and betray a curious unfamiliarity with the historical background of Plato's life. No. 11, for instance, is condemned as committing the absurdity of making Plato plead old age as an excuse for not coming in person to assist the projects of Leodamas at a date when Socrates was still alive. Of course the absurdity only exists in the mind of the critic.

The Socrates meant is Plato's pupil, the mathematician Socrates who appears in the *Theætetus* and takes a prominent part in the *Politicus*. Surely an Oxford scholar should have known that the activity of Leodamas, himself formerly a member of the Academy and a mathematician, did not fall in the years of the Peloponnesian War. The odd thing is that while Mr. Richards rightly recognises that the Greek of the letters is that of the *Laws* and *Philebus*, he should have supposed that such extraordinary blunders could be made about the simplest facts by any writer of the middle fourth century whatsoever. He does not see that his concession about the date of the letters absolutely destroys his case against their genuineness. Another singular blunder is made about the meaning of the expression in No. 2 that the Dialogues are not to be regarded as a σύγγραμμα Πλάτωνος (a compendium of Platonism, such as we are told in 7 there never was nor will be), but as Σωκράτους καλοῦ καὶ νέου γεγονότος. Mr. Richards rightly rejects Grote's mistranslation of this phrase, but his own explanation is no better. He says that "Plato was a καλὸς καὶ νέος Σωκράτης; Socrates became young and good-looking when Plato identified himself with his old master by putting his own ideas into his master's mouth". Thus Plato is made to contradict himself, since, on this interpretation, the dialogues *are* a σύγγραμμα Πλάτωνος, a work expressing the thought of *Plato*. The words should be rendered simply "Socrates made handsome and young," and the sense is that the thought of τὰ τοῦ λεγόμενα is that of Socrates, but quickened and beautified by the literary skill of Plato. The further arguments adduced against the letter are trifling. *E.g.* it is not true that a "new argument for immortality" is found in the fact that the best men care most for what posterity will say of them. (*Cf. Symposium*, 208 C, ff., where Diotima dwells on the same point.) The demand that Dionysius should take the first steps to contradict the report that he had affronted φιλοσοφία in the person of Plato is only dignified and proper when we recollect that Plato was the head of a University and that it is the public credit of this body which is at stake. As to the complaint that the famous "enigma" is "mystical," we have no right to infer that the author of the *Timæus* and the passage about the "period of the ἀνθρώπειον γεννητόν" could not have written it, and it is at least no great puzzle to any one who understands the *Timæus*.

So the alleged contradiction in the argument of 3 seems to me to be a pure fancy. What Plato says is that he had recommended Dionysius to settle the Greek cities in Sicily, but to educate himself first; later on (*i.e.* when Dionysius attempted to settle the cities *without* having educated himself) Plato took no part in his actual proceedings. This seems a natural and consistent line of conduct.

Ep. 5. The only objection raised is that it is "pointless" that Plato, in sending another man to advise Perdiccas, should antici-

pate the criticism that for all his (Plato's) fine theories about politics he had effected nothing in his own State. Since the other man was, of course, to be the mouthpiece of Plato's views, it is quite to the point that Plato should give his answer to the critics who were sure to say to Perdiccas, "How can you trust the advice of a mere unpractical dreamer who has never been in public life?"

Ep. 7 and 8. It is, of course, in the case of these two letters that the question of authenticity is of the highest importance, since, if genuine, they are not only of high biographical value, but are also political manifestoes of the Academy. With what Mr. Richards calls the "insuperable difficulty" of ascribing the section in 7 on ἐπιστήμη to Plato I propose to deal separately in MIND, and hope to show that the sense of the passage is both excellent in itself and thoroughly Platonic. The minor points alleged seem to me all useless as arguments against, and some of them valuable as arguments for, genuineness. Thus I do not think it true that "it is not clear what the letter was meant to be". It is a pamphlet, addressed in the first instance to the survivors of Dion's party, but perhaps mediately to the Greek world in general, which had been much interested in the attempt of Plato to do for Sicily what Lycurgus was fabled to have done for Sparta. The main object is to show exactly what the aims of Plato and Dion were, and to urge that Dion's death has not made their accomplishment impossible. The autobiographical narrative is strictly in place, as its purpose is to explain how Plato had come by the convictions with which he had inspired Dion. To call it "vain, egotistic, ineffective," is merely to abuse what you have already decided on other grounds to depreciate. Nor can I see any objection to the digression about immortality at page 334 E. Mr. Richards thinks it "uncalled for and clumsily worded". As far as the wording goes, it is hardly as clumsy as *e.g. Philebus* 16 C-18 E, to say nothing of whole pages of the middle books of the *Laws*. As to relevancy, surely it was relevant enough to dwell for the heartening of Dion's friends on the thought that a man who has fallen in a good cause has entered on the heritage of immortality.

The assertion in 324 C that during the Terror the affairs of Athens and the Piræus were controlled by fifty-one men (*i.e.* the Thirty and their two principal executive boards) is objected to on various trivial grounds. "Everybody else speaks of the Thirty, never of the Fifty-one." If we needed to produce an argument against a theory of later forgery, the very fact that the letter does not say, as a forger would have done, "thirty men," would be of much weight. But if the letter is really of the date to which it purports to belong, a fourth-century writer could speak of "fifty-one"; whence then may not Plato? But it is odd that the "Athenian board of the Eleven should be assimilated to the board of Ten set up in the Piræus". Not at all odd, seeing that both boards were used by the Thirty for exactly the same purposes. They had not to make a new board at

Athens because they found just the organ they wanted in the existing "Eleven"; that is all. As for the "confusion" by which these executive boards are apparently said also to have discharged the functions of agoranomi and astynomi, it is just the sort of "confusion" likely to have occurred under an *interim* revolutionary Government secretly aiming at making itself permanent. They would naturally give their irregular executive as many functions, properly belonging to other and more constitutional bodies, as they could. Nor is it really singular that the powerful democratic leaders who procured the prosecution of Socrates should be called δυνάστευόντές τινες. It is just like the application of the phrase "Dollar Dictator" at the present moment to a gentleman who certainly does not occupy the legal position of a "dictator". That Hermodorus should have called the same persons τύραννοι is an instance of the same kind of rhetorical language which tells in favour of the genuineness of our letter. Why should not Plato call "dictators" the persons whom his pupil called "despots". (Of course Hermodorus knew that Anytus was not in cold fact a τύραννος; the notion that a pupil of Plato could have represented Socrates as executed by the Thirty is simply ridiculous.)

"In 328 A the younger brothers of Dionysius, who were children at the time, are apparently said to have been able to encourage him in his philosophical pursuits." It is overlooked that the passage speaks of Dion's ἀδελφιδοῦς καὶ οἰκείους, and only says that, according to Dion, they might be won over for Plato's schemes and use influence with Dionysius. The οἰκεῖοι, at any rate, were presumably not all mere children. And though Hipparinus, the eldest of Dionysius's brothers, must have been some years his junior, since we know that his mother bore no children to Dionysius I. for some while after his double marriage, yet, if we suppose him to have been ten years the younger of the two, he would still be on the verge of twenty at the time referred to, and so quite old enough to say "Send for Plato"; "why don't you go in for being a philosopher-king?" Mr. Richards further finds a contradiction between the assertion of 332 A-B, that Darius had known so well how to attach the houses sprung from the "conspirators" to himself that their loyalty "has kept the Persian kingdom together down to this day," and *Laws*, 696, where we are told that Darius made the mistake of neglecting the education of Xerxes, with the result that there has been no really "great King" since Darius, and the Persian dominions would not now be difficult to conquer. But surely both statements, that Persia had held together down to Plato's day, and that it would not be so formidable a task to conquer her as one would think, are true, and therefore quite consistent.

Ep. 8. The one objection made is the old one that Plato assumes that Dion's son Hipparinus was living after his father's death, whereas the biographers say that he died before him. To argue from this to the spuriousness of the letter is illogical. Plato is—if it is he—

the earliest authority for the events, and *may* be right as against Timæus and the other sources of the later biographers. As E. Meyer says, the disagreement between Timæus and Timonides about the name of Dion's son may indicate that he had two sons. Or, even if the biographers are right, Plato may not have been properly informed when he wrote the letter.

Mr. Richards's own guess that 7 and 8 are "prize essays" does not approve itself to me. Isocrates set his pupils to this kind of exercise; the early Academy, from all we know of it, is unlikely to have cultivated the art. And the egotism Mr. Richards finds in the *Letters* (if genuine) is nothing to the egotism which Plato suffered from if he really set his pupils to write prize essays on "*My* Sicilian Policy".

A. E. Taylor.

A New Law of Thought and Its Logical Bearings. By E. E. Constance Jones. With a Preface by Prof. Stout. "Girton College Studies," No. 4. Cambridge University Press, 1911. Pp. vii, 75.

Miss Jones has made a great discovery. She has discovered the Law of Significant Assertion, and also that it does not find a place among those which Logic enumerates as the self-evident Laws of Thought. In other words she has discovered that Formal Logic has hitherto ignored significant assertion and that one (at least) of its 'laws of thought' is *not* a significant assertion. This again may plainly lead on to the discovery that Formal Logic has nothing to do with significant assertion, and in fact *means nothing*. This curious predicament has long been a *secret de polichinelle* in the inner circle of pragmatist logicians, and has even been more or less plainly hinted at in print. But its public proclamation may precipitate a crisis. It is to be feared that it may so enrage logicians that their proscription of the heretics who want a logic which *is* concerned with significant assertion will spare neither age nor sex. Miss Jones therefore will need the support of all who want logic to mean something. It will be well however to begin by explaining what precisely her innocent-looking little book has achieved.

Of all the 'self-evident' 'Laws of Thought' that of 'Identity' is the most obviously unmeaning. That significant assertion *never* takes the form '*A is A*' nor predicates a subject of itself, is as clear as daylight and could not but impress itself even on the most orthodox logicians. In significant assertion the predicate is always different from the subject. If therefore it is taken as a necessary truth that there must be a 'Law of Identity,' Hegelism was surely entitled to protest that the 'identities' (so-called) which occur in judging must always contain differences. But this protest is only the beginning of an attempt to make logic mean something. For

it left the precise relation of the 'differences' to the 'identities' as obscure as ever. It is at this point, therefore, that Miss Jones begins her analysis. She assumes that 'every name or term has two aspects, the denotational or extensional and the intensional or connotational' (p. 9), that the "denotation of a term means the sphere of its application—the things to which the term applies," and the intension "the properties of the things to which the term applies" (p. 71), and that 'identity' is to be confined to denotational oneness (p. 10). It is inferred thence that every (categorical affirmative) proposition asserts 'identity of denotation in diversity of intension' (p. 28). That is, the denotation of S and P in *S is P* is the same, though S-*ness* and P-*ness* of course remain diverse. In other words, though S and P are conceptually distinct, they yet both *apply* to the same *thing*, and it is this identity of reference amid diversity of (dictionary-) meaning which is the meaning, and gives the meaning, of all judgments. Thus while it is *not* asserted that as such and in the abstract S and P are the same, it *is* asserted that for the purpose in hand and in the case in point this connexion may be effected, because both S and P apply to something which in fact combines these diverse qualities.

Miss Jones has worked out the formal technicalities of this formula with admirable fullness, though she has hardly drawn sufficient attention to its importance for the general theory of knowledge. To some extent however this deficiency is made up by the brief, but very lucid, preface with which Prof. Stout introduces the book. Prof. Stout prefers to consider Miss Jones's formula not as a law of 'identity,' but as a law of significant assertion and as logically prior to the laws of Contradiction and Excluded Middle, and it would seem that his view was preferable in this respect. On the other hand it looks like inadequate appreciation of Miss Jones's service to Logic to declare that this "lies not so much in the mere enunciation of the Law of Significant Assertion" as in her application of it to special problems (p. vi). Surely to have laid down the conditions of Significant Assertion is an achievement which may eventually redeem Logic from the reproach of being meaningless.

Its importance is concealed from Prof. Stout by his failure to perceive that it is not only "*a* fundamental law of Thought," but *the* most primary and indispensable law of all, and moreover utterly incompatible with the 'Law of Identity' as hitherto understood. Prof. Stout thinks that "the best writers on Logic tend to interpret this law as expressing the immutability of truth . . . it means that the truth of a proposition is unaffected by variation of time, place and circumstances, or of the minds which apprehend it". But whether it or the Law of Significant Assertion is "the most appropriate interpretation of the cryptic formula '*A is A*' is of quite subordinate interest". Here it seems impossible to agree. If an assertion to be significant has to assert diversity of intensions amid

identity of denotation, any logical principle which ignores this requirement becomes strictly meaningless. It may be shown moreover that this is just what the 'Law of Identity' does.

It follows from the Law of Significant Assertion that every judgment must 'have' both 'denotation' and 'connotation'. If it has no 'denotation,' *i.e.*, until it is *applied*, it means nothing. The unapplied formula, or mere connexion of intensions, is a mere form of words, which as yet is unmeaning. It is impossible to say whether it is true or false that 'it is hot,' until a judgment is actually made and the phrase is actually applied on some particular occasion. When it is so applied, it is asserted that the subject and the predicate terms, the (dictionary-) meanings of which are diverse, are *in this case* applicable to the same thing or situation. This application gives, and is, the real meaning of the judgment; or, otherwise, turns the form of words into a judgment. The meaning of '*S is P*' thus is strictly *ad hoc*, and depends on its *application to a particular case* which is both 'S' and 'P'. Hence to have a meaning (and *a fortiori* to be true) a proposition must be *applied. But to apply it is to use it*, and thus the formula manifestly develops into Mr. Sidgwick's definition of the pragmatic principle, *viz.*, that *meaning depends on application.* It yields indeed the briefest, neatest, and completest proof of pragmatism that has yet been devised. For if *to have a meaning* every proposition must be applied and *used*, it is clear that it cannot be *true* unless it is used, and that all 'truth' must be useful. If use is necessary to constitute *meaning*, it is *a fortiori* necessary to constitute *truth.* Pragmatism, as Capt. H. V. Knox has pointed out (*Quarterly Review*, No. 409, pp. 397-405), should be conceived not as a doctrine about the meaning of 'truth,' but more profoundly, as a demand for a meaning, which rationalism has until now refused to consider. All truth is useful only derivatively and because useless allegations are devoid of meaning—in any but a dictionary-sense, which need never be the actual sense. This formula, however (quite rightly), does not carry us beyond truth-claim. It tells us under what conditions *S is P* can convey a meaning, *viz.*, if it is used in a particular situation. It does not tell us anything more, whether *e.g.*, the identification holds, *i.e.*, whether 'S' *truly is* 'P' in this case. A guarantee of meaning is not *ipso facto* a guarantee of truth. We are given the correct *formal* analysis of significant judgment, without a pretence that anything is thereby prejudged about the real truth of the truth-claim, and so the question of real truth is left to be attested by something more conclusive than the mere form of the allegation. We are thus enabled to distinguish the prior problem of meaning from the subsequent testing of a truth-claim, which may of course always turn out to be erroneous.

Now it is over this prior problem that Miss Jones's Law challenges Formal Logic. It insists that application to a particular case is essential to the existence of meaning. This is to say that

the time, place, context, personalities, and circumstances of a judgment are essential to its conveying a meaning. Now this ὕλη of any actual application is precisely what 'the best logicians' seem to have determined shall be abstracted from by their version of the 'Law of Identity'. 'A is A' is taken to mean the 'eternity of truth,' 'once true always true,' *i.e.*, that when once anything has been (successfully) called A it shall be A henceforth for ever more, without regard to changes of time, place, context and circumstances, and no objections based on these shall be listened to.

Now this is an attempt to *avoid* the risks of application to a particular case and the liability to error and misuse which is inherent in significant assertion. It is a demand for an *a priori* guarantee of the 'truth' of a formula, and a refusal to allow the question of its truth or falsity to be determined by its actual working in each case. The truth of the universal is rendered independent of the truth of its particular exemplifications. It is all very clever and a very pretty dodge. It dodges the vital question whether a 'universal' that has been found useful once in analysing a situation will be equally successful the next time any one chooses to employ it. It simply begs the question whether when we want to argue from one 'case' to another *we are right in ignoring the differences* between $A^1(+ \ldots .)$ and $A^2(+ \ldots .)$, which may really turn out to be for the purpose in hand a 'case' of 'B' or 'C,' by pointing triumphantly to the 'eternal' 'identity' of abstract 'A,' and so burkes the question whether in this case (so-called) 'A' is *really* 'A'. And though by doing these things it wholly parts company with actual thinking, it is very comforting to the craving for dogmatic certainty.

But unfortunately it is in flat contradiction with the Law of Significant Assertion.

This is where it slips up. The Eternity of Truth is only maintained at the cost of abstracting from the particular case as such. It is truth, not only without application, but to the exclusion of application. For, in fact, wherever there is application there is risk of error. For it is *never* self-evident that *A is A* in any particular 'case'. For the 'A' has always changed from the last time it was 'identified,' and there is always a question whether this change is not relevant, and fatal to the proposed application. Hence the only way to maintain the 'self-evidence' of '*A is A*' is *never* to apply it. Thus the declarations that until there is application there is no meaning, and that though there is meaning it may be false, are *fatal* to the Eternity of Truth. It is seen to be literally a meaningless 'law,' and it aims at the subversion *a priori* of the risk of error which is involved in all meaningful assertion. Either it, therefore, or the Law of Significant Assertion must go, and Prof. Stout's irenical (or ironical) suggestion that they might toss up as to which should inherit the title of the meaningless 'Law of Identity' is no solution at all. To accept

Miss Jones's law is to insist that before there is 'logic' there must be thought, before there is thought there must be meaning, before there is meaning there must be application, before there is application there must be purpose and prospective use. It condemns therefore as meaningless every form of 'logic' which tries to abstract from the use of thought. On the other hand to cling to the interpretation of the 'best logicians' is to turn all these positions upside down.

But how far, it may be asked, have our 'best logicians' really intended all this? Have they really meant to base their 'science' on an abstraction from meaning? That no doubt is what its character actually is, and it is the explanation of its scientific sterility. But were they fully aware of what they were doing, of what their craving for 'eternal,' indisputable and self-evident truths (won without tears and without labour) was leading them on to? It is certainly hard to believe this was consciously intended by any of our 'best logicians,' and it will be more charitable not to believe it until they have openly and unequivocally asserted that their 'logic' rests on 'laws of thought' which have no meaning and prohibit all meaning, and have explicitly upheld their contention against a better analysis of thought. But an *éclaircissement* is certainly required, and Miss Jones's book ought to provide a welcome occasion for it.

F. C. S. Schiller.

Un Romantisme Utilitaire: Étude sur le Mouvement Pragmatiste. Le Pragmatisme chez Nietzsche et chez Poincaré. By René Berthelot. Paris, Alcan, 1911. Pp. 416.

M. René Berthelot has the instincts of a historian. His notion of philosophising is to trace the history of an idea and to mention all the 'influences' his erudition can bring into 'logical connexion' with it. That is, he does not approach it in a biographical way and track it to its fountain-head in the soul of the man who first created it, but by way of meditating on what seem to him the logical connexions it has with all and sundry other ideas that were published before it. And as his erudition is great the poor little idea inquired into soon gets crowded out, and we usually lose our interest in it long before we get to it. The fundamental assumption of this way of writing the history of thought is of course that no thinker can ever as such have done anything but read books and write books about the books he has read—indeed it is censured as an inconsistency for those who believe in action to write at all! (p. 92). The *men* behind the books therefore are invisible to M. Berthelot. He never suspects any one of a capacity of doing such things as observing and thinking for himself in a spontaneous, ignorant and original way. The short way therefore to take with every 'new' doctrine is to decompose it into materials taken from

older books, and so *ad infinitum*, which gives much scope for the display of irrelevant erudition. That among the by-products of this method is a large crop of mares'-nests and 'logical connexions' which are imaginary and psychologically false, and would seem to be laughably wrong to any one who knew the men whom M. Berthelot's superior learning patronises as the victims of historical 'influences,' does not trouble him. But the result is that he has written a highly cultivated, entirely unenlightening and quite dull book on a fascinating subject—two men of genius.

His thesis is that Pragmatism is a Romantic Utilitarianism, and his hope that if he can describe in Nietzsche the extreme form it takes on the side of excess and in Poincaré the extreme on the side of defect, in which it is so 'fragmentary and mitigated' as hardly to amount to 'pragmatism' at all, all the other forms of pragmatism may be accommodated somewhere between these extremes and refuted by implication.

The first drawback to this plan which is revealed by its execution is that while M. Berthelot is willing enough to take pragmatism in so vague and general a sense as to find traces and anticipations of it everywhere, as may of course legitimately be done by the historian of philosophy, he is himself very vague about the essential meaning of modern systematic pragmatism and has not grasped what precisely it is driving at. The reason of this is that he has evidently never felt the difficulties and inadequacies in the rationalistic account of truth, and believes it to be something intelligible and capable of discriminating between truth and error. Consequently he is liable to treat as pragmatism in a systematic sense what is not pragmatism in this sense at all, and to overlook the vital differences between it and strict and conscious pragmatism.

Now this is the case with Nietzsche, and gets M. Berthelot into his second difficulty. It is possible to quote from Nietzsche, and especially from his posthumous *Wille zur Macht* (which curiously enough M. Berthelot hardly mentions), a large number of aphorisms which sound very pragmatic. But it is bizarre to treat Nietzsche as the exponent of a coherent doctrine, and at any rate no one who wished to compare him with self-conscious pragmatism should fail to note two fundamental differences. In the first place he (as a rule) represents the usefulness and vital value of a belief, and the mental activity which goes to form it, not as grounds for holding the belief *true*, but as grounds for holding it *false*, while at the same time insisting that the human spirit must be educated on errors and fed on illusions. Nietzsche's doctrine is really a 'hyper-pragmatism' of the kind beloved by M. Schinz, and it really goes back to Kant's doctrine of the '*als ob*' and his dualistic denial of the theoretic validity of beliefs which are practically necessary.[1]

Secondly, the reason for this is that Nietzsche has *not* shaken off

[1] It is curious that M. Berthelot should so completely ignore the manifestly Kantian reference of much pragmatic reasoning.

the intellectualistic notion of truth as a correspondence of thought with reality, nor perceived that it is nugatory and inconceivable. It is only because he has not seen through it that he can infer that pragmatically valuable beliefs are false, because they do not simply *copy* the given 'reality,' but 'mutilate,' and alter and manipulate it in all sorts of ways, instead of inferring that if *all* knowing does such things then this sort of thing must be called truth and not 'falsification'. But as in this point M. Berthelot quite agrees with Nietzsche he too could not be expected to see that Nietzsche was not strictly a pragmatist, but (very instructively) remained enmeshed in the intellectualism against which he was revolting.

The case of Poincaré is entirely different. His pragmatism springs at first hand out of his knowledge of the difficulties of the sciences of which he is a master. He is a scientist, and his primary business is to clear his sciences of the rubbish that impedes them, and not to teach the philosophers how to dispose of *their* rubbish heaps. Naturally, therefore, his pragmatism is limited in scope. He has not applied the pragmatic method beyond the spheres of his own scientific concern, viz., mathematics, mechanics, and physics. But within these limits he has applied it in a supremely masterly way, and thereby performed an inestimable service to pragmatism. For the mathematical sciences had always been regarded as the inexpugnable citadels of rationalism, and were at any rate built of different stuff from the Jerichos of absolutist dialectics. But Poincaré has not so far cared to generalise the method he had employed so victoriously. Hence he has not become an *all-round* pragmatist. He can even protest against the application of the pragmatic method to all knowing. But his reasons in protesting show that he has not concerned himself with the thought of those who *have* generalised the pragmatic method, and his protest is in reality a confirmation, and not a refutation, of an all-embracing pragmatism. He objects to reducing truth to 'utility' (in a rather narrow sense) on the ground of the great *æsthetic* value of scientific research, and proclaims his delight in knowledge for its own sake. But thoroughgoing psychological pragmatism can recognise and welcome both these motives. Æsthetic value is for it still a *value*, and personal delight is still a satisfaction, and both are adequate to making even the most remotely 'theoretic' knowing appear 'useful' and valuable to certain minds. The fundamental psychological principle, which no intellectualist critic of pragmatism has so far ventured to attack, is that nothing can be known which has not become an object of interest and a means to the ends of some human mind, and this is not impugned. The pragmatists, therefore, who claim Poincaré are fully within their rights, and the three sorts of 'convenience,' to which, according to M. Berthelot, he appeals, are all of them psychologically homogeneous, and *all* pragmatic.

M. Berthelot, in his criticisms of Poincaré, shows more learning

than insight. He actually argues, *e.g.*, that Poincaré's conception of 'convenience' is 'self-contradictory,' because for different purposes different doctrines are considered 'convenient' (p. 356). His criticisms are all nugatory, because he does not strike at the psychological root of pragmatism, because he so often cannot see the wood for the trees, and has too firm a faith that whenever he gets out of the wood he will come into the presence of Plato and Hegel, whereas, in fact, he often comes out unwittingly in a totally different quarter. It is surprising, for example, that he should not see that his preference (after Poincaré) for the analytic as against the apodictic method in science, which he explains very well on pages 303-308, commits him to a *denial* of absolute truth. For the mutual correcting of theory and fact is evidently a process that can go on for ever, and can never be arrested by the truth of any 'absolute' stopping place.

It remains merely to add that M. Berthelot's references to the history of pragmatism are very fairly correct. He knows that C. S. Peirce was *not* the first to use the name in public, though he believes that it was the *Will to Believe* that James launched in his California address (p. 10). He can also spell Peirce's name correctly, though he deprives both Tyrrell and Russell of their last letter. He does not suspect the importance of Dewey (p. 18), and has not heard of Sidgwick; but the fact that he makes the Rev. R. J. Campbell a philosopher and a pragmatist, and credits him to the Anglican Church (p. 25), cannot be said to matter seriously.

F. C. S. SCHILLER.

The Psychology of Education. By J. WELTON, M.A. London: Macmillan & Co., 1911. Pp. viii, 507.

I CONFESS I find a difficulty in describing the scope and purpose of Prof. Welton's book. He wishes it, he says in the Preface, "to help people engaged in Education to study the actual lives of individual children," and hopes it may inspire some "to publish precise records of careful observations". Upon which I looked forward to a summarised account of what had already been done in the fields of Child-Study and Educational Psychology, with, perhaps, suggestions for further work. But in this hope I was disappointed. How greatly disappointed will be seen from the fact that there is no mention of, or reference to, the work of Stanley Hall, of Meumann, or of Stern, whilst Thorndyke (*sic*) is referred to once. I do not think it will inspire others "to publish precise records of careful observations" when the 'precise records' of the very leaders of the movement in the direction of Child-Study and Educational Psychology are themselves ignored in a book dealing with Psychology and Education.

The first chapter, entitled "Education and Psychology," contains

many valuable warnings against the view, if any one holds it, that, if you know the science of psychology, you are, *ipso facto*, a teacher. Of course a psychologist has to learn to teach, like other people; and of course it is well known that much of the psychological knowledge of to-day is irrelevant for purposes of education. I agree quite heartily with Prof. Welton when he says, speaking of experienced teachers: "Such persons can teach the beginner much, though they have never heard such blessed words as psychosis and apperception or have made experiments with chronoscopes, kinetoscopes, and ergographs". And I can go heartily with him when he says that theoretical educational psychology "should consist of generalisations from an experience wider than those of any individual educator, but of the same kind as those which every real educator makes". "Such a psychology is only in the making." Again I heartily agree. But I fail to find in Prof. Welton's book any reference to those who, in America and Germany, have been trying to make it. Indeed, to me, the first chapter of this book might fitly have been written by a trenchant critic of the whole modern movement in Education. Let me quote the author once more. Psychology cannot determine the end of education, it can neither lay down methods nor test their results; it is "pure muddleheadedness" to say that "teaching method should not be logical but psychological". What can one say to all this? True enough it is that the natural science of the facts of mind cannot determine our ideals of education. But it can influence them. For the ideals of reasonable people are bound up with and limited by the facts they know. And in the field of method psychology is worthy of much fuller consideration than the author here accords to it. Genetic psychology does *suggest* methods. Certainly we need to go further; hence has arisen the newer science of Experimental Pedagogy which tests the methods suggested by genetic psychology. And, doubtless, popular cries are "muddleheaded" things; but there is a real distinction—a distinction which issues in different practices—between those who advocate 'logical' and those who advocate 'psychological' methods. The latter believe in being guided more by the pupil's natural processes of thought in each piece of learning; the former think that the logical development of the subject-matter is the more important thing. The difference is a difference in emphasis, muddleheaded, perhaps, but very real.

In chapter ii. Prof. Welton usefully insists on the necessity for personal mental analysis on the part of the teacher; "by tracing backwards his own life" he "will best fit himself to observe and understand the reverse process" in his pupils. Well! reminiscence is doubtless valuable, but again I looked for the recommendation of the development of this propædeutic into actual experimental investigation; and again, as it seems to me, the author stops short just where modern educational psychology is going on.

He rightly warns us that "the reaction against unintelligent

learning has shown signs of undervaluing the automatic element which is so important in all the executive activities of life". Yet, after all, the disputed question is not so much whether there shall be an acquisition of useful executive automatisms, but how these automatisms shall be acquired. Shall they be learnt separately and applied afterwards, or learnt by practice within the total process of which they form part and to which they are subsidiary? Only by actual pedagogical experiment can questions like these be decided.

There is a delightful *caveat* about "images" in this chapter: those overworked psychological entities receive a needed set-back; and there is also a useful *caveat* against "spurious interest".

Chapter iii. on Bodily Endowment fits in with the generally non-specialised way of treatment adopted through the book. But it is a little perplexing to read that 'Researches on normal children give no ground for expecting any connexion between size of body and power of mind,' when there has been found, both in England and America, considerable positive correlation between 'size for age' and 'mental advance for age' in the case of school children. Nor can I see what *medical* advice has to do with such things as advising about defective colour-sense or inefficient motor dexterities. Surely, this is work for the educational psychologist.

Chapter iv. treats of General Mental Endowment. There is a discussion of instinct and intelligence; "instinct supplies the motive power; it is intelligence which more or less directs that power into effective channels". The problems of instinct are indeed fascinating; but, for the teacher, would it not be better to use the term conation for this driving force; for conation covers all tendencies, instinct only those which are common to all members of the species? And why not for educational purposes cut right across the distinction of Instinct and Reason? The educationist wants to know, firstly, what the child will attain to and what he will learn without teaching; and secondly, what differences teaching and training will make. Nature and Nurture are the categories under which the educational research work of the future will be done; in this respect following the methods of recent biologic science.

The disputes between the "Biometricians" and the "Mendelians" are too summarily settled; the latter claim that unit-characters *do* appear to persist in hereditary transmission as units and do *not* blend in chemical combination (p. 101).

But, as it seems to me, Prof. Welton rightly challenges Dr. Archdall Reid's assumption of a curious break between the mental and the physical which leads the latter to assert that the child of refined English parents reared by African cannibals would resemble his parents physically but a savage mentally. The author pertinently asks, Would he not be an *English savage* after all? and demands research, not assertion, as the basis of decision. Research, by the way, does not so far support Roger Ascham's dictum which the

author quotes as an application of real psychology to education, namely, "Quicke wittes commonlie be apte to take, unapte to keepe".

Obviously, much as I should like to follow the author chapter by chapter, the space at my command renders it impossible. There are interesting chapters on the Nature of Experience, the Development of Interests, Direction of Activity, Learning by Direct Experience, Learning through Communicated Experience, Critical Thought, Ideals and Character.

If I must summarise where I should much prefer to elaborate and discuss, I should strongly recommend a reading of these chapters by all those who wish to look at the problems of teaching and education from a higher than a merely professional standpoint. The psychology to be found in them is mostly of a general description and the author's points are well illustrated by extracts from literary authors. His assertions are always interesting and stimulating even when one feels a large measure of disagreement with them.

But, whilst gladly acknowledging the help given by an analysis of our own minds and the reminiscences of our own early education, and the interest attaching to a knowledge of particular cases like that of Mr. A. C. Benson's boy who passed the Cambridge Previous Examination because he learnt his Greek authors by heart, I altogether fail to acknowledge the necessary validity of arguments derived from them (pp. 370, 371).

If there is to be science in Education there must be controlled experiment on large numbers under varied school conditions. Two experiments cited by Prof. Welton occur to me, one at Cheetham's on the inclusion of Handwork in the curriculum (p. 204), and another on Infant-School Drawing (p. 304). On work of this sort the future of educational science depends. But it is extraordinarily difficult; and there are dozens of conditions, psychological, pedagogical and statistical which have to be clearly shown before work of this kind does any more than support the preconceived opinion of the experimenter. For instance, there is a certain stage of observation and analysis of the human figure as shown by drawing which, subject to slight variations due to social class, is a constant for school-groups of certain ages. How far a training in the drawing of objects (the children had not, presumably, for test purposes, drawn the lady before) will place the children ahead of the stage due to natural genesis alone is a profoundly interesting question. Even one such experiment, carefully described, with all relevant conditions and results stated, would be of very great value to education.

W. H. Winch.

Das Problem des absoluten Raumes und Seine Beziehung zum allgemeinen Raumproblem. Von ALOYS MÜLLER. Braunschweig: Friedr. Vieweg & Sohn, 1911. Pp. x, 154. Price, in paper covers, Mk. 4; bound in cloth, Mk. 4·80.

IT is one of the characteristics of the present time that mathematics and natural science have begun to take a vivid interest in questions relating to their own foundations. Thus it comes about that the two great German firms of Teubner and Vieweg are each in the middle of the publication of a series of books, for the most part stimulating, well-written, and distinguished by real ability, dealing with the general aspects of particular branches of science, or with the historical, critical, logical, or philosophical aspects of these branches. The volume under review is the thirty-ninth of Vieweg's series entitled *Die Wissenschaft*, a collection of monographs on natural science and mathematics and their bearing on other scientific and philosophical questions.

At first Dr. Müller's problem was wholly critical: to decide as to the right or wrong in the discussions on absolute and relative motion. But his investigations led him to the wider question of the general space-problem (p. v). Dr. Müller mentions (p. vii) that his book was, in essentials, finished in 1909; and we shall return to this point in the critical remarks which we shall venture to make.

Dr Müller's book is divided into three parts, and has three appendices. The first part is on the logical and physical theory of absolute space, the second is on the philosophical theory of absolute space, and third is on non-Euclidean geometries and absolute space. The three appendices are on Kant's theory of space, on the truth and truth to actuality of physical knowledge, and on Heymans' theory of mechanism, respectively.

An introduction (pp. 1-5) is concerned with the seeking of a point of view which is independent of any special epistemological turn given to the subject-object-problem. "The epistemologically neutral picture of the world is actuality as it is given to the normal consciousness, without any conscious or unconscious (inherited) addition made by thought" (p. 4). The phoronomical, or kinematical, picture of the world is defined as the picture of the world as a sum of points and point-aggregates which exist in complete mutual independence (p. 5); and absolutists are defined as those persons who assert that a body can have motion or be at rest even if it stands in no geometrical or physical connexion with other bodies of the universe, and hence space is defined to be absolute if it allows us to ascribe motion or rest to such an isolated body (p. 6).

Dr. Müller then enunciates and proves three theorems on the phoronomical picture (pp. 6, 7, 12): (1) We can only measure relative motion; (2) The supposition of an absolute motion is

pointless for mechanics and unusable by it; (3) The phoronomical picture of the world does not afford from any standpoint either a proof for or against the existence of absolute space. The conclusion of some relativists, from the fact that, for us, there are only relative motions, that there are, in general, only relative motions, is as unfounded as Berkeley's well-known conclusion that bodies are only our sensations and presentations (p. 7). In fact, Dr. Müller wishes to convince us that, in science, an absolute space is logically presupposed, though it cannot, of course, be a matter for experience. Now this thesis seems to us to be undoubtedly true, and to appear almost without disguise wherever we apply mathematics to natural phenomena. We will return to this point.

After deciding (p. 14), that the dynamics of the phoronomical picture of the world—the dynamical consequences of the above three theorems—is partly unusable and partly contrary to experience, Dr. Müller (pp. 14-24) criticises the attempts, principally of Mach [1] and Lange, to construct a dynamical picture of the world. The conclusion of the rather destructive criticism on Mach is (p. 19) that "In order to make a consistent structure of physics possible, the dynamical consequences of the principle of phoronomical relativity must be made unique (one-valued), or, in so far as they are false, removed, by fixing the axes of reference with respect to which the law of inertia and the laws of motion hold good". Lange's attempt, on the other hand, gains approval, but we must remember that (p. 24) "the actual fixation of an inertial system always remains an ideal; we can, indeed, approximate to it in practice as nearly as we wish, but, speaking theoretically, we can never reach it". When discussing (pp. 24-36) the inertial system and absolute space, Dr. Müller (pp. 24, 25, 34) proves that: (1) The ideal inertial system has no immediate connexion with the actual inertial system and the empirical system of co-ordinates of astronomy; (2) The ideal inertial system has the same degree of reality as the spatial moments (extension, magnitude, form, position, velocity, direction of motion, acceleration, centrifugal force, and so on) of bodies; (3) The ideal inertial system is the absolute space. Thus, absolute space appears as a necessary term in a consistent and complete system of the logical foundations of physics, and its character within the logic of physics is discussed on pages 36-49. Finally (pp. 49-55) the question as to whether the logico-physical theory of absolute space throws new light on the principle of inertia and on inertial actions is dealt with.

The logical necessity of the concept of absolute space has not a specially physical character; and the motive on which, in the last instance, it rests is only a special form of a more general logical principle, and may thus be taken as foundation for a corre-

[1] Dr. Müller's criticisms on Mach appear to us on the whole good. As Mach is widely read in England, it may be useful to give references to these criticisms: they are on pp. 8-9, 13, 15-19, 28-29, 32-33.

spondingly more general justification of the concept. To this founding the second part (pp. 56-121) is devoted. Specially interesting is the chapter (pp. 90-121) on "The Foundations of the Metaphysic of Absolute Space in Modern Physics," where the researches of Lorentz, Einstein, and others are spoken of and the points made that: (1) A rigid structure of mechanics is impossible in the old manner because *mass* is not constant; (2) The results and presentations of modern physics show a tendency towards the doctrine of absolute space in, among other things, identifying space with the æther.

The third part (pp. 121-134) is busied with the problem as to the relation in which the concept of absolute space stands to the concepts of the various non-Euclidean spaces.

The principal criticism that must be made on Dr. Müller's book is that no notice whatever has been taken of the supremely relevant discussions of the logical questions relating to absolute and relative space and time that have been published in England during the last twelve years, principally by Mr. Bertrand Russell. We are told on page vii, that the book was, in essentials, finished in 1909; but this would not account for the omission. The omission is, we venture to think, accounted for by works in English not having been consulted. In the index of literature, not a single English book or article is cited, except in a French or German translation.

The fact that absolute time and space are logically presupposed by physics results, it would seem, from the consideration that, when we apply mathematics to the description of natural phenomena, we replace the moments of time and points of space by elements of the aggregates of real or complex numbers,—and these aggregates constitute absolute scales of measurement.

PHILIP E. B. JOURDAIN.

VII.—NEW BOOKS.

Proceedings of the Aristotelian Society, 1910-1911. London: Williams & Norgate, 1911.

The volume of *Proceedings* under review contains some interesting and important papers. Psychology enjoys the greatest favour of any one subject, but logic and theory of knowledge are well represented, and there is one contribution on Ethics by Miss Oakeley.

The first paper, by Prof. Alexander, is on 'Self as Subject and as Person'. It abounds in startling and heretical views. The writer distinguishes two meanings of Self: (i.) Subject who thinks, wills, etc., and (ii.) The body. The Person is a combination of (i.) and (ii.). The object of the paper is to show that (i.) never is a presentation, that (ii.) always is; whilst (iii.) partly is and partly is not. Under the title of 'body' Prof. Alexander includes all in which we are interested. But, later on, he remarks that consciousness and the body are localised in much the same place, so that here he cannot be using 'body' to include *e.g.* Psychology as he does at the beginning of his paper.

The Subject is consciousness as an element in all experiences. In cognitive consciousness the object is never mental; it is the other element alongside of the conscious act. To be conscious of an object just means that that object evokes the act of consciousness. I do not see that this follows. I agree that you can and must separate the object of perception from the element of consciousness and that the object is so far non-mental that its qualities are physical like size and shape. But this does not involve either (*a*) that it may not depend for its *existence* on its relation to consciousness; nor (*b*) does it seem obvious that because the mind must be influenced by something in order to perceive X it is X that must influence it.

The Subject then 'consists of certain conscious acts'. We are further told that it is a thing, that it is 'enjoyed or suffered but not contemplated'. It is extended and acts of consciousness have direction; and, finally, consciousness is a property of certain kinds of neural activity. Assuming that the subject is a set of related mental events and that a thing is also a related complex of states we may agree that such a subject as Prof. Alexander suggests may be a thing. But it is rather an unusual kind of thing if the events that constitute it are themselves qualities of something else (*viz.* neural activities) as the writer asserts. With regard to the extension of consciousness and the direction of conscious acts the argument is that we are vaguely aware of extensity and direction from immediate experience and that psychological investigations enable us to localise accurately by reference to the brain and nerves. I do not possess the alleged introspective evidence, nor do I see what ground there would be for identifying vaguely felt directions of conscious acts (if such there be) with directions in the brain which are afterwards found to be connected with them.

But the most important question is about self-consciousness. The Subject, Prof. Alexander says, cannot be an object of contemplation. Two reasons are offered. (*a*) If so it would be a sensible thing, and it is not; and (*b*) It would imply that my mind can act on itself. No weight can be laid on (*b*) if we do not admit Prof. Alexander's contention that my knowledge of X must always be evoked by X itself. With regard to (*a*) I do not see that the author has proved it. The fact that the objects of some direct awareness are not mental but physical is no reason why the objects of all direct awareness should be physical. It seems to me quite clear that we can and do make our mental acts objects of direct awareness, whatever may be the case with the self as a whole.

We are told that the act of experiencing 'is experienced though not in the same way as the object that it is directed upon. It is itself experiencing and is experienced only as we strike a stroke as opposed to striking a ball.' But to strike a stroke means no more than to strike, whilst to experience an experiencing means more than merely to experience unless the whole question is begged.

The view that we cannot contemplate as objects the states of our self compels Prof. Alexander to give a special account of the memory of such states which amounts practically to the renewal of states like those that have gone by.

The next paper is by Prof. Bosanquet who criticises a remark of Bergson's that the function of the intellect is to link like to like. It is argued that this is not a tenable account of inductive processes, but that the ordinary logical account of induction as a process of elimination tacitly assumes it to be true. The writer has no difficulty in showing the barrenness of the principle 'Same Cause when repeated gives same Effect,' and thus he leads up to his doctrine of the concrete universal. What his own suggestion appears to amount to is 'Something more or less like the old antecedent will probably be followed by something more or less like the old consequent,' together with the view that the general procedure of science is an attempt to see just how much identity and of what kind is needed in transferring laws from the known to the as yet untested. If this be the argument we may agree that it cannot be treated formally with the precision of which eliminative methods allow.

Dr. Schiller's Essay on 'Error' contains some excellent criticisms on the theory of truth of which Mr. Joachim's Essay is typical; though I cannot understand why Dr. Schiller should invariably assume that all non-Pragmatists must hold Mr. Joachim's theory of truth. Dr. Schiller's treatment of Error seems to suffer from a confusion between error and the recognition of error. We are told that: 'For a mind which errs whatever is affirmed seems true and error does not exist. Thus error comes into being only by being found out.' Surely the right statement would be that it only comes into *knowledge* by being found out. Otherwise what is the force of 'seems' in the first sentence quoted? Again the fact that we are 'not entitled to call any opinion erroneous until we have seen our way to a better' does not tell us anything about error but only about the conditions under which error can be recognised. So that I do not agree that 'the existence of error necessarily implies a second assertion'.

I agree with Dr. Schiller that for a theory of truth like Mr. Joachim's either all is true or all error, but I cannot see why the Formal Logician is also incapable of detecting error. He cannot detect all errors; but surely he can detect formal fallacies.

Error is finally defined as 'what thwarts a human purpose in cognitive activity'. If the latter phrase means 'what thwarts a human purpose to get at the truth' it will hardly be denied that this is a mark of error;

though, since it is also a mark of headache and many other things, this is hardly a correct definition.

Finally it seems to me that the old criticism is valid that, when you take fulfilment or frustration of a purpose as a criterion of truth the question of whether the purpose is really fulfilled or frustrated has to be true in some sense independent of any reference to purpose.

Intellectualists will be grieved to learn from the conclusion of the paper that to their other disabilities has now been added the fact that they have no right to be able to see a joke.

Mr. Carr's article on Parallelism accepts Bergson's argument that that doctrine is incompatible with either idealism or realism. Neither side of the argument appears to me to be necessarily true. Parallelism could be stated in terms of any idealism that is not purely subjective. And the alleged incompatibility with realism might be answered as follows: If the result of X acting on my body is a physiological process which is itself a complete cause of my perception of X then (*a*) it is gratuitous to suppose that exactly the same process could be set up if X did not exist, and (*b*) supposing that this were possible and that parallelism is true we should merely get on the mental side the mental reaction appropriate to the perception of X if it were there to be perceived, but it would lack an object in this case. The difficulties of parallelism lead Mr. Carr to desert natural science for a Bergsonian view of the nature of reality.

The positive part of Miss Jones's paper on 'A New Law of Thought' is an attempt to show that all affirmative propositions primarily assert identity of denotation with diversity of connotation. By connotation she means what Dr. Keynes calls 'subjective intension,' since for her even proper names have connotation in use. This analysis Miss Jones holds to be prior to any other analysis of propositions. She then attempts to show that the usual immediate inferences follow. To do this she has to combine her law with the quantification of the predicate; for, on her view, S is P always gives P is S; so that she must reduce all conversion to simple conversion. The phrase 'identity of denotation' must be taken to mean that some part and it may be all of the denotation of one term is identical with some part and it may be all of that of the other.

The latter part of the paper consists of replies to objections to this theory brought by Mr. Russell. These take us to Mr. Russell's paper on 'Knowledge by Acquaintance and by Description'. Here Mr. Russell asks: 'What do we know when we know propositions about "the so and so" without knowing directly the object denoted by this descriptive phrase?' We have direct acquaintance with sense-data, with certain universals, and probably with ourselves; but our knowledge of the external world and of other persons is of the descriptive kind. To be assured of the truth of any proposition about 'the so and so' we must have direct acquaintance with some particular or particulars. When we make an assertion about 'the so and so' what we should like would be to have direct acquaintance with the object described by the phrase, but this is in general impossible, and what we get is a description of the proposition that we should like to affirm. Even when we use proper names as subjects they are really descriptive phrases.

Mr. Russell then asserts that every proposition that we can understand must be composed wholly of constituents with which we are acquainted. This must be understood in connexion with his theory of judgment. Judgment for him is a complex united by a many-term relation, and the argument is that all the terms in any judgment must be objects of acquaintance to the mind which is also a term in the judgment. It follows

that in a proposition that contains the phrase 'the so and so' the real judgment does not contain the term thus described. It is in the attempt to reinforce this theory from the logical side that Mr. Russell and Miss Jones come to blows. There are various answers and arguments, but, as touching the present question, the essential point seems to be that Mr. Russell holds that on Miss Jones's theory the object denoted by a descriptive phrase must be a constituent of the judgment. This does not seem to me to be necessary. On Miss Jones's view: Scott is the Author of *Waverley* means that the object denoted by 'Scott' (whatever that may be) is identical with the object denoted by the phrase 'The Author of *Waverley*'. I fail to see that this involves direct acquaintance with the object called 'Scott'; hence so far Mr. Russell's and Miss Jones's theories seem compatible.

Mr. Russell has however two independent arguments: (i.) Some descriptive phrases like 'the round square' have no denotation, and (ii.) An alleged vicious infinite regress. I do not think that Miss Jones extricates herself from the first difficulty. But has the phrase 'round square' any subjective intension either? The proposition: 'The existent round square does not exist' just seems to mean that the phrase has no denotation. The proposition that it does exist merely means that the *word* existence is part of the phrase. So interpreted the two propositions are compatible, but such an interpretation is incompatible with Miss Jones's theory for existential propositions at any rate. As regards (ii.) there is no doubt that Mr. Russell has found a genuine infinite regress; the only question is whether it is vicious. On Miss Jones's theory Scott is the Author of *Waverley* means What is denoted by Scott is identical with what is denoted by 'the Author of *Waverley*'. But this is a proposition and so it must be treated in the same way. This gives What is denoted by 'what is denoted by "Scott"' is identical with what is denoted by 'what is denoted by the "Author of *Waverley*,"' and so on *ad infinitum*. I hesitate to pronounce a decided opinion, but might not the solution be that what is denoted by 'Scott' is identical with what is denoted by 'what is denoted by "Scott"'? The regress would then be infinite, but not I think vicious.

Prof. Stout argues in his paper on 'The Object of Thought and Real Being' that everything that can be thought about must be supposed to have some kind of being other than that of being an object for thought. This must be true of the objects of erroneous judgments as well as of those of true ones; for, if you separate being as object of thought from real being at all, this must be done for the objects of true as well as those of false judgments. In that case we shall need a theory of correspondence between the two sorts of objects in order to distinguish between true and false judgments. But such a theory will not help us, for correspondence with *anything* will not do; it must be correspondence with the object that was actually intended in the judgment, and this object never is intended to have being merely as object of thought. In judgment we assert that one of a number of possible alternatives is fulfilled in the reality judged about. Prof. Stout holds that alternatives are not mere objects of thought, but also have real being. His argument is: We must accept the reality of universals, and they are essentially capable of alternative determinations. On the other hand alternatives always are relative to a universal. Hence we must accept the reality of alternative possibilities. The argument seems to me ambiguous. It no doubt proves that there are *alternants* of universals like isoceles and scalene with respect to triangularity, but does it prove that an *alternative* like 'isoceles or scalene' has real being? Might this not be reduced to 'triangularity is both isoceles and scalene, but not in the same instances'?

False belief consists in believing in a possibility being fulfilled when the alternative asserted is other than any fulfilled one. The paper concludes with a criticism of the theories of judgment of Mr. Bradley and Mr. Russell.

Prof. Caldwell contributes an interesting paper on Emotionality, with special reference to a mediæval Italian saint, and Mr. Dunville argues at length for the standpoint of subjective idealism within psychology.

D. Broad.

The Scope of Formal Logic. By A. T. Shearman. London: University Press, 1911. Pp. xiv, 165.

The main object of Dr. Shearman's little work is to explain and illustrate the principles of the newest symbolical logic, and to show its superiority in scope and power as an instrument of exact thinking over the traditional formal logic derived partly from Aristotle, partly from the Stoic logicians. In the actual execution of this programme he devotes himself chiefly to a simple exposition for the uninitiated of the guiding principles of the symbolic systems of Frege, Peano, and Russell, though his last two chapters are given to the consideration of philosophical issues of a more ultimate kind, the questions of the real nature of number and the absoluteness or relativity of position. As a first introduction to the study of a genuine Formal Logic Dr. Shearman's book has considerable value; it is clearly written, well-illustrated by examples, and there is just enough of it to stimulate its readers to wish for further acquaintance with the subject. These are considerable merits, but they are also accompanied by one or two considerable defects. For one thing, Dr. Shearman does not seem to have studied the authors whose views he expounds in their latest developments. In the case of Mr. Russell this was unavoidable, since his *Principia Mathematica* (composed in collaboration with Mr. Whitehead) came too late for use, but it was scarcely fair, in comparing Frege and Peano with one another and with Mr. Russell to take no account of the former's master-work, the *Grundgesetze der Arithmetik* (which differs for the better in many respects from the *Begriffschrift*, the only book of Frege of which any great use is made in Dr. Shearman's volume), or to refer exclusively to an early version of Peano's *Formulaire* which attained its fifth, and apparently final, form two or three years ago. I am not sure that Dr. Shearman's view as to Frege's inferiority in *philosophical* grasp would have been maintained by any student of his ripest writings. It is, at least, noticeable that on more than one point Mr. Russell's *Appendix* I. to the *Principles of Mathematics*, and the later *Principia Mathematica* exhibit important differences from the text of the *Principles* which are directly traceable to the influence of Frege's *Grundgesetze*. And I have noted a passage in Dr. Shearman's own book where he falls into an error which would certainly have been prevented by study of Frege's little essay *Funktion und Begriff* (p. 10, second sentence).

There are also a number of odd statements about Mathematics which would, I imagine, surprise the authors for whom Dr. Shearman has so high a respect. *E.g.*, at page 3, Euclid, I., 4, is declared to be a proposition dealing with "couples". In point of fact, nothing is said about a "couple" anywhere in the proposition, as Dr. Shearman may convince himself by trying to express it accurately in symbolic notation. I note the same confusion, in a different context, at page 86, where a relation R (it seems to be tacitly assumed, in defiance of known truth, that all simple relations are relations of two terms) is identical with the system of

"couples" of which it is "predicated". But, of course, when a relation R holds between a and b it is *not* in any sense predicated of the couple (a, b). a may be to the right of b, but there is no sense in saying that (a, b) "is to the right". At page 12 we are oddly told that in the equation $ax + by + c = 0$; a, b, and c "indicate the direction of a straight line". I need not say that a and b completely determine the *direction* of the straight line, quite independently of c, since $-b/a$ gives us the tangent of the angle made by the half-ray above the axis of x, with the positive direction of the x-axis. At page 87 we hear that Euclid, I., 4, has, as an unexpressed hypothesis, the assumption that "x is a kind of space that is indicated by the Euclidean axioms". This is at least most misleading, since the suggestion is that I., 4, is only valid in a "Euclidean space". In point of fact, the special axiom which characterises Euclidean space, *viz.*, that its constant curvature is zero, plays no part in the demonstration; the proposition holds equally good for a Lobatschetfskisan space with constant negative curvature, though not for a "spherical space" with positive constant curvature, since congruent figures cannot be constructed everywhere in such a space.

A more serious error is that more than once Dr. Shearman treats the assertion of the equality of two distances as equivalent with a one-to-one correspondence between two classes of points. This means that he has forgotten that there is a one-to-one correspondence between the points on *any* terminated straight line and those on *any* other, irrespective of metrical considerations. Similarly he contrives, in giving a philosophical account of the concept "number" to fall into what looks like a serious blunder. He says (p. 127) that the cardinal number c "consists of the classes which are similar to the class p, where p is a class with c members," and this he regards as part of a demonstration that "cardinal number" can be defined in terms of pure logic. Yet the definition as he states it will seem to his readers to employ the very concept to be defined. He should at least have begun by showing that the integers, and the notion "number of members of a class" can be defined without introducing the notion of "cardinal number". As he has not done this, he is certain to be misinterpreted. There are one or two important logical issues on which also I fail to follow Dr. Shearman's argument. Thus at page 80ff. he tries to show that Mr. Russell is wrong in holding that no significant proposition can be made about the totality of propositions itself, and that this is the reason why the so-called "Epimenides" is a fallacy. Dr. Shearman's view is that, though the "Epimenides" is certainly fallacious, other arguments involving a premise in which "all propositions" figures as subject may be valid. He gives as an example the following: "All propositions consist of a subject and a predicate; the statement 'all propositions consist, etc.' is a proposition; *ergo* that statement consists of a subject and a predicate". He does not, however, make the slightest attempt to show why this inference should be more valid than the "Epimenides," *i.e.* to indicate the conditions in which a statement about "all propositions" is significant. And, as it seems to me, the conclusion of his syllogism is manifestly false, since there are many propositions which do not consist of subject and predicate. Even if this analysis were true of all other propositions, it is clear by inspection that it is not true for the statement about "all propositions" itself. And from this it follows that the statement must not be included in the "all propositions" referred to in the premisses. Hence the example given above is no real exception to Mr. Russell's doctrine of types and of the hierarchy of orders of truth and falsehood. Dr. Shearman himself only succeeds in the easy task of pointing out that the "Epimenides" *is* a fallacy; he gives no reason why, in that particular case (*i.e.* in the case where we speak

of "all the statements made by liars") a form of reasoning which is valid in other cases should lead to nonsensical results. Had he, as he might easily have done, constructed an argument of the following kind, "All propositions contain a subject and a predicate, but the assertion 'all propositions, etc.' does not contain a subject and a predicate, though it is a proposition, *ergo* some propositions do not contain a subject and a predicate," he would, I think, have seen that the difficulty raised by Mr. Russell is just as real in this case as in that of the "Epimenides," and the doctrine of types is really necessary to remove it. Similarly I cannot think that the arguments of pages 84-85, which are directed towards showing that it is not generally true that if the alternative $x\mathrm{R}y \vee y\mathrm{R}x$ is to be significant x and y must be of the same type, are particularly happy.

Dr. Shearman's example of objects of different types which stand in a relation such that $x\mathrm{R}y$ and $y\mathrm{R}x$ are both significant are two. The first is obtained by giving to x the meaning "the South Magnetic Pole is discovered" (a proposition of the first order), to y the sense "it is believed that the South Magnetic Pole is discovered," and to R the meaning "was published at the same time with". Thus $x\mathrm{R}y$ is to mean "'that the South Magnetic Pole is discovered' was published at the same time as 'it is believed that the South Magnetic Pole is discovered,'" and $y\mathrm{R}x$ will be the converse of this statement. Therefore $x\mathrm{R}y \vee y\mathrm{R}x$ has in this case a meaning though x is a first-order proposition and y a second-order proposition. But is it clear that the x and y of this instance *are* of different orders? If y and R retained their proposed sense while x were taken to mean "the South Magnetic Pole," there *would* be such a difference, but also the resulting $x\mathrm{R}y \vee y\mathrm{R}x$ would be meaningless. As things stand, however, what is "published" is not the Pole, nor yet its discovery, but the statement that it has been discovered; x and y are thus both of the form "the statement that ϕ". Hence I think we might say that x and y themselves are of the *same* order; the difference of order affects only what I have called ϕ, which is not itself a term in the relation. The whole assertion is thus "'the statement that ϕ_1' is made simultaneously with 'the statement that ϕ_2,'" and in this assertion, when we remember that ϕ_1, ϕ_2 are not themselves its terms, x and y do appear to me to be homogeneous. The second example given is "a was born in the same year as 'Lycidas is dead'." Here, says Dr. Shearman, "there are related two objects of different types, and there is a meaning if the positions of the two objects are interchanged". I think Dr. Shearman only reaches his result by careless statement. The proposition he really means to affirm is that the birth of a took place in the same year as the publication of *Lycidas*. Here x = the birth of a, y = the publication of *Lycidas* (or, if you like, of the words 'Lycidas is dead'), R = took place in the same year as. Since the person a and the complex of ink and paper which we call the first edition of *Lycidas* are, with Mr. Russell's definitions, objects of the same order, it seems clear that "the birth of a" and "the publication of *Lycidas*" are also "of the same order," and Mr. Russell's demand for the homogeneity of x and y is therefore fulfilled, and Dr. Shearman's objection is seen to be unfounded.

The account of Frege's propositions about the "inheritance" of a characteristic by a series will, I fear, be found obscure by the readers for whom the book seems primarily intended. I could wish they had been assisted to understand by the simple observation that the object of the reasoning is to prove the validity of the process of "mathematical induction," and that Dr. Shearman had abstained from a standing mistranslation in virtue of which Frege is regularly made to speak of that which is 'inherited' by a series as an "experience". Frege's own word is *Ver-*

fahren ("operation"; can there be some confusion in the translator's mind with *erfahren?*), and he always speaks of the "inheritance" not of the operation, but of the result of the operation. (*E.g.*, in the series 2, 4, 6 . . . 2 *n* . . . what is said to be "inherited" is not the operation + 2, but the resulting property that every term is divisible by 2.)

I cannot make much of some of the arguments for "absolute" position in the last chapter. Indeed, I do not see how the *mere* reduction of geometrical formulæ to their precise logical equivalents can afford any relevant ground for deciding the question of "absolute" *versus* "relative" position one way or the other. And I do not think any of the mathematical philosophers whom Dr. Shearman reveres would lightly accept his doctrine that a point (*e.g.*, the "North Pole") has merely "oeing" until some explorer has reached it, but acquires "existence" by the fact of being reached. This attribution to the Arctic explorer of a power of creating points, like the curious identification of a "concept" with a mental "act of attention" (p. 133), is an example of the precise form of "idealism" against which both Frege and Russell are never tired of contending.

A. E. Taylor.

Studies in the Psychology of Sex. Volume vi.: *Sex in Relation to Society.* By Havelock Ellis. Philadelphia: F. A. Davis Company, 1910.

"The main task before us," says Mr. Havelock Ellis in his Preface, "must be to ascertain what best expresses, and what best satisfies, the totality of the impulses and ideas of civilised men and women. So that while we must constantly bear in mind medical, legal, and moral demands—which all correspond in some respects to some individual or social need—the main thing is to satisfy the demands of the whole human person" (p. vi). It is in this wide sense that the present volume is a study in the "*Psychology* of Sex". The book is really the climax of a laborious series of special studies. Here it is sought to summarise, correlate and estimate results from the standpoint of the action and possible duty of persons in modern society. In a narrower sense, too, the volume is "psychological"; for, while in the former "studies" the author was able to maintain a strictly objective and descriptive attitude, in the present study, which includes conduct, he cannot but indicate his own bias, if not always his definite views, on questions of heated current discussion. But the volume, however we define the standpoint, is one of the most important yet published in English; to our humiliation, I cannot say "in England"; for the series was forbidden here, only to be produced in America. It is a problem by itself to settle where the right and wrong lie in this complicated matter of literary "economy"; "morals" we can call it only in the sense that "morals" and "customs" are the same. But, published in America, the book circulates in England and is read there. To the author, it is some consolation, on the completion of a life-task, that the thinkers are not prevented from obtaining his books. That they have to obtain them from abroad is only a proof that our country moves more slowly along some lines than along others.

Let it be said at once that these studies, from first to last, are of the highest value to every serious student of society, whether he be a professional psychologist, or moralist, or sociologist, or only a doctor, or a schoolmaster, or a preacher. The sex-question is the failure of every civilisation and these studies help us to a science of sex-problems. One cannot but admire the detachment of mind exhibited in the patient analysis of

researches, the estimation of views, and the determination of practical values. This is a scholarly work, and will remain indispensable to every student in this field.

The discussions are far too elaborate and detailed to be readily summarised. But here are the chief lines of exposition: In "The Mother and Her Child" (chap. i.), every leading question about motherhood and the psychological relation of mother and infant is indicated,—pregnancy, repose during pregnancy, ante-natal education, suckling, etc. "The reasons why children should be suckled at their mothers' breasts are larger than some may be inclined to believe. In the first place, the psychological reason is of no mean importance. The breast with its exquisitely sensitive nipple, vibrating in harmony with the sexual organs, furnishes the normal mechanism by which maternal love is developed. No doubt the woman who never suckles her child may love it, but such love is liable to remain defective on the fundamental and instinctive side" (p. 25). In chapter ii., a group of problems is discussed under "Sexual Education". The importance of the discussion is acknowledged. There is not an educational conference held in the world without some discussion of education in the sex-life,—intellectual and ethical. Special chapters are given to "Sexual Education and Nakedness" (chap. iii.), the Valuation of Sexual Love (iv.), the Function of Chastity (v.), Sexual Abstinence (vi.). Then the less individual and more intricately social problems are handled; among the first,—Prostitution (vii.). A hundred pages of closely relevant discussion form a peculiarly valuable presentation of this ethical storm-centre. "By aiming to develop and raise the relationships of men to women, and of women to women, by modifying our notions of sexual relationships, and by introducing a saner and truer conception of womanhood, and of the responsibilities of women as well as of men, by attaining, socially as well as economically, a higher level of human living,—it is only by such methods as these that we can reasonably expect to see any diminution and alleviation of the evil of prostitution. So long as we are incapable of such methods we must be content with the prostitution we deserve, learning to treat it with the pity, and the respect, which so intimate a failure of our civilisation is entitled to" (p. 318).

Other chapters are given to "The Conquest of the Venereal Diseases" (viii.), and "Sexual Morality" (ix.). The distinction between the "disgusting" and the "immoral" is of primary ethical importance; but the British Public as yet do not draw the distinction (p. 359). Of the long chapters on "Marriage" (x.), "The Art of Love" (xi.), and "The Science of Procreation" (xii.). all we need say is that the author selects his materials, and presents them with very high literary skill, and the most catholic fairness of feeling. "We have now at last (after 638 pages) reached the point from which we started, the moment of conception, and the child again lies in its mother's womb. There remains no more to be said. The divine cycle of life is completed."

There is a pathetic and dignified "Postscript". "Nor has the effort to crush my work resulted in any change in that work by so much as a single word. With help, or without it, I have followed my own path to the end" (p. 640). The laws that evoke such a fine protest are no less disgraceful to our civilisation than the religious persecutions that for centuries have produced so many cowards and time-servers among our official and unofficial thinkers and writers. It is all the more pleasant to recognise a brave man when we find one,—as here.

W. L. M.

Individualism. Four Lectures on the Significance of Consciousness for Social Relations. By WARNER FITE, Ph.D. London: Longmans, Green, and Co. 1911. Pp. xix, 301. Price 6s. 6d.

This robust plea for Individualism is based on a somewhat thin and transparent metaphysic. Dr. Fite begins with the abstract distinction of mechanism and consciousness. The latter is in summary fashion invested with spontaneous efficiency acting according to teleological rather than causal motives, and characterised by the reference of its complete content to the self. A psychological individualism is made to bear the onus of the ethical and sociological application. As conscious beings we are freed from mechanical determination and are bound to construe our world and our activities as intrinsically our own. In the same way we must interpret the existence and energies of other individuals in terms of conscious selfhood, and the social problem must be set and solved from the standpoint of the individual.

It is the writer's endeavour to show that this view does not, either in its intention or its results, involve a "selfish" theory of society. His proof of this rests upon the preliminary distinction referred to. The collision and mutual exclusion to which mechanical units are subject is impossible where conscious purpose is concerned; and where such conflict does occur in our human endeavours it is due to the relative absence of consciousness or intelligent apprehension of the situation—*i.e.*, to a defect in our conscious individuality. A complete consciousness of ourselves and our purposes would include a specific reference to the purposes of others, and so would secure a comprehensive harmony of ends. The weight of moral responsibility is thus thrown upon intelligence, and the ethical question becomes the technical one of practical adjustment.

The metaphysical weakness of this presentation is apparent. It is not difficult to see that Dr. Fite has become the victim of the abstractions which he introduces with careful apology. His position is doubly defective, (1) in placing all opposition within an abstractly mechanical order, and (2) in seeking the solution in a meaningless negation of the order within which the opposition is supposed to fall. This results in a virtual dualism, somewhat analogous to that of the Spinozistic attributes, from which the only refuge is the iteration of the *quatenus*—the alternate presentation of the one side and the other. Dr. Fite seems conscious of this deficiency in his metaphysic, where, in attributing man's ambiguous position between two principles to the limitation of his consciousness, he confesses that the reasons for such limitation are unknown. It is difficult to see how the writer, in equating the distinction of harmony and opposition to that of consciousness and unconscious mechanism, can either accept or evade the obvious criticism (with its serious implications) that all oppositions (not merely *distinctions*) fall within, and exist only for consciousness.

A further difficulty which can hardly be overlooked occurs in the attempt to vindicate an original subjective reference in all aims, as against the original *objectivity* of conscious purpose maintained by Prof. Dewey and most Idealists. Dr. Fite warmly supports the *equal* claims of subject and object as elements in consciousness. But how on such grounds can he differentiate in favour of an *enlightened self-interest* as the principle of individual duty?

The concluding lecture, which has no need of the apologetic introduction, shows the writer less concerned about the metaphysical justification of his views, and is probably the best in the book. Here we find a refreshing sanity of practical judgment, and many admirable remarks on such subjects as patents, stock-corporations, and unearned increment. A

tribute of thanks is due to Dr. Fite from lovers of spiritual honour, even from those who differ most completely with him, for his refusal to pay verbal homage to the maxims of self-sacrifice and brotherly love which Christianity has invested with a sanctity too often profaned in the profession.

ARCHIBALD A. BOWMAN.

Motive-Force and Motivation-Tracks: a Research in Will Psychology. By E. BOYD BARRETT, S.J. London: Longmans, 1911. 6s. net.

This volume reports an elaborate series of experiments carried out in the laboratory of the Catholic University of Louvain. The author, who recognises Prof. N. Ach and Drs. Michotte and Prum as his only effective predecessors in the experimental study of the will, designed his experiments to throw light on character and the process of volition, and claims to have succeeded in this difficult task. But though the experiments were ingeniously planned and seem to have been carefully conducted, and though the results are by no means devoid of interest, it seems to the present writer very doubtful whether they can properly be said to bear directly on the problems of volition and character. Eight liquids, appearing similar to the eye, but variously flavoured so as to range from very pleasant to very disagreeable to the taste, were prepared, and each was named with a simple nonsense syllable. Four subjects were then trained to associate these names with the flavours of the liquids. When they had become very familiar with the flavours and their arbitrarily chosen names, the experiments were conducted as follows: Two glasses containing two of the liquids were placed before the subject, and, after the usual warning signal, the names of the two liquids were suddenly exposed, each immediately above the glass containing the corresponding liquid. The subject then, according to previously given instructions, chose as quickly as possible one of the two, raised his hand from a key at the moment his choice was made, took up the chosen glass and drank its contents. The time elapsing between the exposure of the names and the subject's raising his hand from the key was measured in each case with the aid of the chronoscope; and the introspective report of the subject was at once written down. Now the instruction of the subject was given in terms which implied that he was to take and drink the liquid whose taste was to him the more pleasant or the less disagreeable. His task, then, was to recall a decision or judgment previously arrived at as to the relative pleasantness or unpleasantness of the two liquids. It is difficult to accept the view that this process of judgment or recollection was also one of volition. In so far as volition entered into the whole experiment, it was, surely, accomplished at the moment in which the subject agreed or consented to obey the instructions given him, *i.e.*, at the outset of the whole series of experiments. If, when a subject has consented to do as I bid him, I throw down two cards of unequal size, telling him to pick up the larger one, no true volition is necessary on his part at the moment; the issue of his judgment of relative size, following upon his voluntary acceptance of my instruction, immediately determines his action. And the process of reaction in these experiments would seem to have been essentially of this nature, though the grounds of the judgment may have been rather more complex. It is then no matter for surprise that the analysis of character to which the author is led by his experiments is very inadequate, being comprised under the following seven heads: hedonism, hesitation, inconsistency, imagery, æstheticism, active tendencies, resistance to tendencies.

W. McD.

The World of Dreams. By HAVELOCK ELLIS. London: Constable & Co., 1911. 7s. 6d. net.

In this volume Mr. Havelock Ellis has brought together observations and theories of dreaming from a very large number of writers, and has arranged them with judgment and literary skill under appropriate headings. The book is thus a useful compendium of the literature of dreaming; but it is more than this, for the author has studied and recorded his own dreams and those of his friends for many years, and brings many instructive illustrations from the store of material thus accumulated; and in the light of his own rather rich experience of dream life and his wide knowledge of the literature, he criticises the principal theories and seeks to arrive at consistent explanations of the more important facts. Unlike some of the best-known writers on this topic he does not attempt to bring all dreams under any one type of explanation, but recognises the wide diversities of dream processes. Indeed he errs, perhaps, in the contrary fashion; for his eclectic method and sympathetic appreciation of writers of many schools seem to have led him to the acceptance in different chapters of conclusions which are not in all cases fully consistent with one another. The principal thesis maintained is that "all dreaming is a process of reasoning," (p. 56) a seeking to explain the presence of (1) some subconscious sensation, *e.g.* headache, or of (2) imagery produced and rationally ordered by a subconscious activity which is induced by sense impressions that do not directly affect consciousness, or of (3) an excess of emotion of visceral origin. But, though this thesis is strongly affirmed in the most general terms, the author, when he comes to criticise Prof. Freud's theory of dreaming, seems disposed to admit that many dreams are merely aimless trains of imagery determined by the accidents of the cerebral machinery (p. 173). Some of the physiological explanations suggested invite criticism, for although the author repudiates "neuronic schemes" and maintains that "the stuff that the psychologist works with must be psychical," he offers certain physiological explanations with a confidence that is hardly warranted; *e.g.* on p. 95, where he tells us that sleep inhibits motor activity and that for this reason sensory excitations are transmuted to emotions, and on page 160, where the tendency to symbolism is explained by invoking some hypothetical choking of sensory channels, an explanation very obscure and questionable in itself and one hardly consistent with previous assertions of the freedom of sensory activities. It may also be complained that Mr. Ellis, although he refers appreciatively to Freud, expounds the dream theory of that author with a brevity which hardly permits him to do justice to its complexity and its importance.

W. McD.

The Evidence for the Supernatural, a Critical Study Made with "Uncommon Sense". By IVOR L. TUCKETT, formerly Fellow of Trinity College, Cambridge, and Senior Demonstrator of Physiology in Cambridge University. London: Kegan Paul, Trench, Trübner & Co., 1911. Pp. 399.

It is very characteristic of subjects of human interest which have not yet been rendered scientific, such as metaphysics, religion and psychical research, that they exercise an enormous fascination on well-meaning people who think, after a more or less hasty and amateurish study of them, that their opinions are important things for the universe to know, and consequently publish and repeat what has already often been said much better. As a rule these enthusiasts take sides *for* these subjects, but the

value of their work and the quality of their thought is not necessarily increased if they happen to take sides *against* them; in either case a superfluous book is added to the literature.

Unfortunately these general remarks are not without a certain application to the book of Dr. Tuckett, who as a trained man of science should have no difficulty in comprehending that his eminence as a physiologist does not necessarily qualify him to decide questions which have not yet been adequately studied, which are still *sub judice*, and which involve psychological, logical and theological problems of the subtlest sort. Indeed his own admissions, though their candour disarms criticism, go a long way to destroy his authority. He tells us that his interest was first aroused by a series of popular articles on occultism in a newspaper, that he then read up the literature on a journey to New Zealand, and that his book is the fruit of the leisure he had during the ensuing year. As he says himself, "I do not profess to have written much that can be described, even vaguely, as original, seeing that it is largely a reproduction of ideas much better expressed by philosophers like Herbert Spencer and G. H. Lewes, by experts in natural science like Tyndall and Huxley, by a student of psychical phenomena like Mr. Frank Podmore". This estimate seems to be substantially correct, and the new facts Dr. Tuckett contributes consist of a few anecdotes, mostly picked up in Tonga and New Zealand, his recording of which does not rise evidentially above the ordinary level, (*e.g.* pp. 25, 155, 229, etc.), and some sensible remarks about 'bias' (p. 354). Curiously enough, however, he seems to suppose that bias is always *in favour of* the 'supernatural'; whereas, in fact, his chief authority, Podmore, had a strong *sceptical* bias, and he himself is an excellent example of the bias which arises from imagining that evidence which does not amount to conclusive 'proof' is scientifically worthless. Now this bias cannot be discussed adequately without going into the relations of the logic of discovery to that of 'proof,' and this is a very large question, which, like the controversy about 'truth,' can no longer be settled by an appeal to the authority of G. H. Lewes. It may further be noted against Dr Tuckett that he is careless about definitions (*e.g.* of 'supernatural,' 'miracle,' 'telepathy'), and in his favour that he does not lose his temper in discussing beliefs he does not share.

F. C. S. Schiller.

Theurgia or the Egyptian Mysteries by Iamblichus. Translated from the Greek by Alexander Wilder, M.D., F.A.S. New York: The Metaphysical Publishing Co., 1911. Pp. 283.

This well-known work, as Dr. Wilder should have informed his readers, suffers from a double misnomer. In the first place, it contains no information of value about the religion of Egypt, being a mere manual of the eclectic superstitions of the decadent paganism of the fourth century A.D. In the second, as most modern scholars are agreed, Iamblichus did not write it. The book is strictly pseudonymous, since the writer was manifestly no Egyptian priest at all, but some unknown person belonging to the Syrian branch of Neo-Platonism of which Iamblichus is the most respectable figure. The only value the work possesses is that, while throwing no light on ancient Oriental religion (since the astrological and spiritualistic superstitions which it expounds are all of Hellenic origin), it demonstrates the identity of character between the follies of dying paganism and those of modern "occultism". Dr. Wilder's translation, though his Greek is by no means impeccable, and he seems not to know that there is a later and rather better text than Gale's, *viz.* that published by Parthey in 1857, is perhaps as good a one as the author deserves.

But I must warn the possible reader against his notes. As might be expected, the whole farrago devised by the Neo-Pythagoreans of the Christian era with a view to deriving Pythagoreanism, and with it Greek philosophy in general, from Egyptian "mysteries" is gravely inculcated throughout the work in what is plainly honest ignorance of the successive steps by which modern scholars have demonstrated its absurdity. Dr. Wilder's erudition, however, leaves something to be desired in other respects as well as this. Thus I do not know what to make of such a statement as this: "The Prytanis of Athens were fifty in number . . . Socrates at the age of sixty was chosen to that dignity" (p. 51), or of the information (p. 51) that ὕλη (which is printed ὑλγ) means "wood, rubbish". Now Aristotle did not call the "material cause" ὕλη because he thought it only good for the scrap-heap. In Attic, of course, when it does not retain the sense of "copse," "forest," ὕλη regularly means either "fuel" or "timber," particularly ship's timbers. It is in this last sense that Aristotle speaks of ὕλη precisely as we do of "stuff" as one constituent of the universe; probably the old Pythagorean notion of the οὐρανὸς as a ship lies at the bottom of the metaphor. "*Genesis* signifies the descending of the creative energy from the sempersistent (!) world into the sphere and condition of created existence, and *phusis* or nature is the female or productive agency by which the transition is accomplished" (p. 68), is a dark saying which has no apparent bearing on the Neo-Platonic or any other Hellenic philosophy. It is odd that in a work "translated from the Greek" nearly every Greek word given in the notes is wrongly spelt, *e.g.* καλυν for καλόν, πέσας and ῥικτὸν for πέρας and μικτόν, τὸ ἀλγαες for τὸ ἀληθές, οἰκορεσηοτής for οἰκοδεσπότης, ἔφως for ἔρως, στοιχείαον for στοιχεῖον. Eudaimonia, which is naturalised by Mr. Wilder, *always* appears as Eudaimonia.

A. E. Taylor.

The Psychology of Belief. By James Lindsay, D.D. William Blackwood & Sons, 1910. Pp. xi, 71.

This small volume—written in a jerky style which often runs into awkward phrases and faulty forms of expression—shows Dr. Lindsay's wealth of learning. Probably few authors possess some acquaintance with so large a number of philosophical and theological writers. In rather less than seventy short pages about as many thinkers are referred to and criticised. The result of course is that the exposition is rapid and slight, and the criticism often consists of *ex cathedrâ* assertions rather than reasoned arguments. So far as we can follow him, Dr. Lindsay states the general position of the writers with whom he deals fairly accurately, though here and there objection might be taken to his critical remarks. For instance it is much too strongly put to say of Bain's theory that readiness to act is "a quite untenable and inadequate criterion of belief". Similarly it is an exaggeration to say that Paulsen's philosophy involves a severance of thought and will. Again, when Sigwart is censured for basing scientific and ethical knowledge on "the merest postulates," it would be more to the point to learn how we can dispense with postulates. A little later on (p. 51) the author will be found emphasising the need of postulates.

Here and there in the essay, and especially in the latter part, Dr. Lindsay gives us his own opinions. Belief, he maintains, does not become knowledge: it is based on knowledge and inference. It is assent to the truth and the psychological side of judgment. The author unfortunately has not made plain the senses in which he uses the word know-

ledge. At the beginning of the book (p. 4-5) the priority of knowledge to belief is urged : later on (p. 64) we find it stated that belief passes into knowledge. Moreover while Dr. Lindsay justly insists on the objective reference in belief, he sometimes writes as if truth, fact, and reality meant very much the same thing. The following sentence—and there are others like it in the book—is not illuminating : "Truth is the reality of things, consists in the correspondence of all things : truth, like Nature, never did betray the heart that loved her : the given truth and the human movement are alike true and needful". The writer is on surer ground when he argues that the whole psychical nature is implicated in belief, and that it is an outgrowth of life.

On the whole this little book, despite its learning, is disappointing : it attempts too much and is lacking in clearness and thoroughness. In his Preface Dr. Lindsay says that there are those to whose wants his essay 'will have relevance'. Who these may be we do not exactly know. But his work might perhaps have been more helpful if he had tried to give, in a simple and connected way, an account of the origin, function, and value of belief.

G. G.

The Desire for Qualities. By Stanley M. Bligh. London: Henry Frowde, 1911. Pp. xii, 322.

The plan of the work is sufficiently simple. Believing that the desires of men, and of groups of men, may be altered, the author endeavours to analyse certain tendencies of life, to suggest tests of their value, and to state some of the ways in which psychology may become 'directive,' *i.e.*, how a study of social psychology may afford practical guidance in educating desire towards a better condition. The volume treats also of the best means of eradicating or restraining vicious tendencies.

Such psychological theory as the volume contains is borrowed, with direct acknowledgment, from other sources ; and, despite a reference to pragmatism, there is no real influence of philosophical speculation. Again, the topics with which the book deals are strung together, not arranged on any systematic principle. The volume can repay only those readers who are content with nothing more than an indication of some points of view for regarding particular concrete problems.

The design and structure of the book lead us to seek its value in the analysis of special frames of mind, the adequacy of special tests and the usefulness of particular suggestions towards reform. In the first respect the work is interesting though never profound : in the second it is, for the most part, commonplace : in the third its suggestions are often shrewd, sometimes original and occasionally unnecessary.

The author fears in the preface that his argument may be difficult to follow because overloaded with illustration. The illustrations are certainly numerous—they range from Tolstoy and William Law to Nietzsche and Oscar Wilde—but they form the best part of the book. It is the structure of the book that makes the author's fear well grounded. There is very little general argument to follow and the book, though small in bulk, is by no means short.

The style of the book, while not laboured, is never terse. Moreover the author has no sufficient excuse for using barbarisms like 'æsthetician,' 'experimentation,' or 'mentality'. And it is distressing to have words like 'depressant' flaunted with all the dignity of capitals.

J. Laird.

The Essentials of Mental Measurement. By WILLIAM BROWN, M.A., D.Sc., Lecturer on Psychology, University of London, King's College. Cambridge University Press. Pp. 154.

The central portion of this book consists largely of chapters already published under the title *The Use of the Theory of Correlation in Psychology*, and reviewed by the present writer in MIND, No. 79. The present volume also includes a useful exposition of the principles underlying the theory of correlation. In Part I. is given a most lucid account of the most important theories and experimental researches as to the possibility of intensive mental measurements. This chapter would prove a very suitable introduction to the subject of mental measurement for the student of experimental psychology, and would help him to keep the main points in true perspective if he proceeded later to the elaborate historical survey of the subject in Titchener's *Experimental Psychology*. In surveying the respective merits of Plateau's "quotient hypothesis" (that "just noticeable differences" are *relatively* equal magnitudes) and of Fechner's "difference hypothesis" (that "just noticeable differences" are *absolutely* equal) the author sums up in favour of the latter. He appears to be undecided between the physiological and psychological interpretations of Weber's law. Part I. also includes a very considerable contribution to the mathematics of the psycho-physical methods. The author's most original work upon the problems of mental measurement consists in the more purely mathematical portions of the book and in the interesting account of his own experiments upon school children and the correlations obtained from them.

C. W. V.

L'Année Psychologique. 17me année. Published by Alfred Binet. Paris: Masson, 1911. Pp. xi, 498. 15 francs.

The recent decease of Alfred Binet makes this seventeenth issue the last of a series of volumes which will stand as a characteristic monument to the untiring industry and zeal of their editor. Begun under the editorship of H. Beaunis, the annual has, ever since its third appearance, been carried on and, to a large extent, written by Binet. On an average actually half the number of pages of original articles was the work of Binet, alone or in collaboration with others, especially V. Henri, J. Courtier, Vaschide, and Th. Simon. About a fifth of the whole original work was written by Binet alone. Only in one year (13th, 1907) did no article by him appear; the volume consisted largely of summary reports and general articles by a number of well-known writers. Binet's own contributions have varied in number from one to nine at a time; in collaboration with Vaschide, he produced in the fourth issue no less than eighteen papers. His attention has swept in a hungry torrent over many different fields in succession, beginning with plethysmography and other forms of graphic registration; passing to anthropometry and graphology, with passages of child-study and descriptive introspection, of which the individual differences in the description of an object, the types—*simplistes*, *distraits* and *interpretateurs*—which appear in æsthesiometrical judgment, and the important foundations of mental tests of developmental stages, are the most important; ending with researches into the psychopathology of various forms of alienation. Binet's more strictly psychological work has always been full of originality and interest, and imbued with delightful clarity and common sense. His vindication of the mental types apparent in æsthesiometrical work against Foucault (pp. 420-427 of the present volume) is an excellent example of the latter qualities. His ex-

perimental investigations of thought formed early and important contributions to the subject. Probably the influence of these very qualities which in other ways were his virtues—simplicity and lightness of touch—have to account for the fact that the priority and method of his researches were (to his obvious annoyance, *v.* pp. viii, 6) not more exclusively referred to Paris or to himself. But the ineffectiveness of his results was also undoubtedly largely the natural result of the hopelessness of his conclusion that thought was to be identified with "sentiment". In this year's volume, as a note to a reference to Marbe's *Bewusstseinslage*. Binet remarks: le terme sentiment "signifie conscience vague, perception mal définie aboutissant à la constatation d'un fait plutôt qu'à son analyse : et, en effet, il s'agit ici de faits de conscience qui ne sont pas analysés, mais dont l'existence nous paraît indéniable et s'impose à nous avec une force inouïe. Il a semblé que l'expression de sentiment convenait assez bien pour exprimer cette situation. En tout cas, c'est ainsi que le terme sentiment s'est introduit subrepticement dans ce domaine et nous comprenons bien qu'il importe de dissiper les équivoques qu'il pourrait faire naître" (p. 19).

In conjunction with Th. Simon, Binet was engaged during the last two years upon a study of various forms of alienation. The greater part of the present volume is devoted to new papers on this subject. The joint authors are responsible for five: "Réponse à quelques critiques" (pp. 270-277), especially those incorporated in the article by M. Mignard, "Fonctions psychiques et troubles mentaux" (pp. 202-232); "La confusion mentale" (pp. 278-300); "Définition de l'aliénation" (pp. 301-350); "La législation des aliénés" (pp. 351-362); "Parallèle entre les classifications des aliénistes" (pp. 363-388), namely, Magnan, Kræpelin and Binet-Simon. To the same field belong three papers by other writers: A. Leclère, "La psychophysiologie des états mystiques" (pp. 97-144), G. Genil-Perrin, "L'altruisme morbide" (pp. 233 250), and P. Sérieux et J. Capgras, "Le délire d'interprétation et la folie systématisée" (pp. 251-269). Of the more occasional papers one, G. Heymans, "Des méthodes dans la psychologie spéciale" (pp. 64-79), consists "essentially" of a chapter of the writer's book, *Psychologie der Frauen*, Heidelberg, 1910; two are concerned with child study: R. Cruchet, "Evolution psycho-physiologique de l'enfant, du jour de sa naissance à l'age de deux ans" (pp. 48-63, summary-table, p. 62), and P. Lapie, "L'école et la société," a few tables showing how children follow or abandon the occupations of their parents, followed by rather vague questionings as to the influence of the school on the correlations.

It is of more general interest to mention Binet's paper on "Nouvelles recherches sur la mesure du niveau intellectuel chez les enfants d'école" (pp. 145-201), in which he sustains his method of mental tests against general criticisms and adds a number of improvements and practical precautions. In the article entitled, "Qu'est-ce qu'une émotion? Qu'est-ce qu'un acte intellectuel?" Binet develops the idea which confronted him in last year's "Bilan de psychologie," when he abandoned his much criticised view of thought as essentially "sentiment" and recognised the rapid growth of a psychology of attitudes. The conclusion now is: "that the attitude is of emotional nature when it is accompanied by strong sensations of an organic nature, and there will be less doubt about the presence of an emotion the more intense its corporeal effects are. The emotion is, then, most specially represented by this complex of organic sensations that accompanies the attitude." Hence the three principal characters of emotion: its corporeality, its individuality, its agreeableness or disagreeableness. Inversely, "the attitude is of intellectual

nature, when it is accompanied by a minimum of subjective sensations, and by a maximum of objective sensations and of images ; it is less corporealised, it seems less material, it seems worthy of pure mind ; intellectual acts are also phenomena that one has always had some repugnance in attributing to the life of the body ; moreover, intellectual phenomena appear less personal, more general ; and finally they are colder, farther removed from pleasure and pain ". " To pass from the one process to the other, only the adjunct of organic sensations which accompany the attitude need be changed. Strip it of these sensations and you have left only an intellectual act ; add them and you have an emotion. Thus the essential unity of the mind is realised " (p. 33).

In the introduction to this volume Binet promised for next year a study begun long ago on the diversity of aptitudes in children, a theory of psychological æsthetics applied to painting, and an essay in synthetic psychology. We may hope that some of these, especially the first, was far enough advanced to be published in the next volume of *L'année Psychologique*.

Over 100 pages of excellent notices and reviews of the psychological literature of last year conclude the volume.

HENRY J. WATT.

Philosophie de la Religion. Par J. J. GOURD. Paris : Félix Alcan, 1911. Pp. xix, 311.

The late M. Gourd was professor in the philosophical faculty of the University of Geneva, and lectured occasionally on the philosophy of religion. The present volume is made up of a course of these lectures. The author had nearly completed the first revision of his work for the press when he died, and the lectures are now published at his request and under the editorship of friends. The concluding chapter came into their hands in an unrevised state, and they have thought it advisable to amplify the argument by extracts from a previous book of the author's as well as from notes of his lectures. M. Boutroux has written an appreciative Preface in which he indicates the philosophical standpoint from which Prof. Gourd treated the problem of religion.

After defining his standpoint in an Introduction the author proceeds to discuss his subject under two heads. The former, which is much the longer, is entitled " The Sphere of Religion," and the latter " Religious Doctrine ". It ought to be said, however, that the book is not by any means a Philosophy of Religion in the full sense of the term. The history and psychology of the religious consciousness are ignored, and the speculative problems of religion receive only a fragmentary discussion. In fact Prof. Gourd's book is not a systematic treatise but rather a number of *aperçus* in which a central idea is vindicated and its bearing on religion shown. The book is an independent and suggestive performance, yet by no means complete nor always convincing.

The scope and method of Prof. Gourd's religious philosophy are determined by certain epistemological principles which he sets in the foreground and insists upon throughout. The Introduction is termed *L'Incoordonnable*, and he seeks here and in his First Part to show how an element which is not to be co-ordinated or rationalised is found in the theoretical and practical spheres, in art and in social life. Truth, we are told, means the enlargement of the mind rather than correspondence with reality ; and this ' enlargement ' is secured by the work of knowledge in co-ordinating or organising the elements of experience in a connected and coherent fashion. But this process of articulation leads in the end to irreducible elements which cannot be brought within the connected order. And we

must at least agree with the writer that the exercise of reason always implies something which has to be rationalised. This irreducible element, it is contended, is not cut off from reality: it is involved in it although it eludes the categories of co-ordination. The existence of this refractory factor forces itself upon us at various points. We cannot absorb the idea of value in that of reality, and the fact of contingency or freedom is not to be merged in the conception of law. Push the examination of the category of causality or substance far enough, and you find that it dissolves into an identity in which the real differences of things are lost. M. Gourd thinks the non-rational element is found in the practical sphere in the fact of sacrifice, which he terms an act of liberty that escapes the law of the subject. His argument is not very cogent, and this interpretation of sacrifice rests on an illegitimate separation of the individual from the social side of morality. The 'sublime' is called *L'incoordonnable esthétique*. Finally the author sees in Mysticism an attempt to transcend the dualisms and distinctions of experience. But he quite rightly notes that the negative attitude of Mysticism to the given world has often resulted in the impoverishment of its own content.

All this may not seem germane to the subject proper of the book, but what is characteristic in Gourd's theory is the identification of the sphere which transcends co-ordination with that of religion. Kant has no doubt influenced him, and he holds with Kant that to turn metaphysics into a kind of theodicy is to condemn it to an illusory task. For him the place and meaning of religion define themselves over against the proved inadequacy of the scientific and rational articulation of experience. Yet there are features in this method which are calculated to provoke doubts. Why should the domain of the non-rational coincide with that of religion? and how is the explanation of religion to be found in this region? We get no clear answer. The author himself favours the theistic view; but seeing that he has reached the conception of the sphere and function of religion by a negative criticism of experience, one would like to know on what evidence he invests the religious relationship with positive content. If he means to invoke faith and to draw on the value-judgments, it is not made plain. He asserts indeed that there must be a solidarity between the different forms of what defies co-ordination: yet his own argument does not necessarily yield this inference, and we are not told the grounds for the statement. On the whole we should say that the religious philosopher ought to stand closer to the facts of religious experience, and to adopt a much more direct and positive method than Prof. Gourd has done.

The two chapters of the Second Part are termed *La théologie traditionelle* and *La théologie de l'incoordonnable*. The former does not refer to the theology of the Churches, as one might suppose, but to that of the traditional philosophy. In this chapter M. Gourd argues against the idea of a God who is infinite, under necessity, and a universal cause. Such conceptions leave no room for the non-rational side of experience and break down before the fact of moral evil. In the concluding chapter he insists that the divine activity must transcend law even while operating through law. He is decidedly opposed to the notion of God as the unity of things, and thinks that infinity excludes personality. God is transcendent in the sense that he transcends the scientific organisation of reality, but he is intimately related to nature though always distinguished from it. In all this the writer is in touch with recent philosophical developments. He attributes personality to the divine Being, apparently on grounds of value; but the discussion in these concluding pages is very slight and rapid, and would no doubt have been revised and extended by the author had he been spared. The closing words of this able and interesting, if rather unsatisfying, work indicate Prof. Gourd's attitude to

current religion: "Let us transform religious institutions in accordance with our conclusions on religion, but let us beware of laying on them a rash, and an irreverent and revolutionary hand". The writer was at all events no iconoclast.

G. GALLOWAY.

La Philosophie de William James. By TH. FLOURNOY, Saint-Blaise. Foyer Solidariste, 1911. Pp. 219.

This little book deserves a hearty welcome as being the best and most interesting account which has appeared up to date of the great American thinker whom the civilised world lost just as he was about to put his unique message into final form. It is also an expression of sympathy from a kindred soul, admirably endowed to appreciate the works of a man like James. The ordinary pedant, whose mind works dialectically or not at all, fails entirely to grasp James's open-mindedness, informality and healthy contempt for verbalities, and cannot put him together again out of his various utterances. The literal-minded critic, who conscientiously compares what has been said in different contexts, and proceeds to neglect the context, is almost equally at fault. But as an old friend and excellent psychologist Prof. Flournoy succeeds in drawing a living and well-proportioned picture, albeit with a certain emphasis on the religious side, while the psychological is passed over with the adequate remark that James was probably the greatest psychologist that ever lived. This religious emphasis is due to the fact that the book was originally delivered as a set of lectures to the Christian Students' Society of Geneva, who in 1910 had asked James to address them. In particular Prof. Flournoy brings out the significance of the fact that James's first signed work (in 1878) was a defence of the right to believe. This, as he rightly observes, establishes the moral origin of James's rejection of monism, and shows that in his fundamental convictions he never wavered. And this is not the only point where even advanced students of James's philosophy will read Prof. Flournoy's lucid and artistic exposition with pleasure and with profit.

F. C. S. SCHILLER.

Zur Geschichte des Terminismus. ALFRED KÜHTMANN. (Abhandlungen zur Philosophie und ihrer Geschichte. Herausgegeben von Prof. R. Falckenberg. 20 Heft.) Leipzig, 1911. Pp. viii, 127.

The author traces the development of Nominalistic ways of thought from the fourteenth century to our own time, selecting for special consideration four writers, Occam, Condillac, Helmholtz and Mauthner (a philologer-philosopher with whom I must confess myself entirely unacquainted, though his works, to judge from Dr. Kühtmann's quotations must be suggestive and entertaining reading). To my own mind the historical sketch really serves to exhibit the impossibility of a consistent Nominalism with unusual clearness. Even Occam's Terminism (though Dr. Kühtmann seems to regard the modern developments of mathematics as its final triumph over Realism), is not really capable of standing before serious criticism. The admission that the "term" is not a mere *flatus vocis* but "suppones" for a real thing or things is a deadly enough one, but a little reflexion will show that even this concession is not sufficient for the purposes of science. For on the "terminist" view the problem of universals is got over by saying that an image of a perfectly individual man may "suppone" for a whole collection of beings generically like him. But now, when I think "*any* man is mortal," what kind of particular

image "suppones" for the "any," which is a fundamental part of my meaning? If we pass to propositions of relation the difficulty is even more obvious. *E.g.* I say "John Smith *believes* that Home Rule will be in operation by 1915". What conceivable image can "suppone" for the relation here asserted between John Smith and what he believes? The possibility of making and understanding one such assertion seems enough of itself to dispose of the whole conception of particular sense-data and memory-images of them as the exclusive contents of our thinking. The types of relation have also to be admitted as indispensable, and types of relation are both universals and also in general non-representable by imagery. Hence as it seems to me, the Scholastic advocates of Realism were absolutely in the right on the main point, the existence of *universalia ante rem*. The modern developments in mathematics are, rightly understood, the very reverse of a victory for any form of Nominalism. In Mathematics, Nominalism should mean the doctrine that the symbols with which we operate *are* the objects which we are studying, *e.g.* that the associative and commutative laws of Addition and Multiplication are actually statements about the written or printed symbols + and ×. This is a view which has had its supporters, but it is not to them that we owe the great developments like Cantor's Theory of the Transfinite, or the reconstruction of the Calculus on a sound logical basis. Altogether Dr. Kühtmann seems, as he himself admits, very imperfectly acquainted with the present state of Symbolic Logic and the Philosophy of Mathematics. The only writer on Formal Logic whom he quotes at all is Schröder, whose work is prior to the developments which have made Symbolic Logic so potent an instrument in the mathematician's hands, and though he alludes to Cantor, it is suggestive that he should still regard the Calculus as dealing with real Infinitesimals, and should talk about "imaginary numbers," and "space of n-dimensions" as being mere *Denkmöglichkeiten*. As though an "imaginary number" were not as "real" as any other number, or as though it were known that experience will never present us with continua of more than three dimensions, which is all that is meant by a "space of n-dimensions" (n. 7). Why should not tastes turn out to be a four-dimensional continuum, and again, if a serious attempt should ever be made to construct an Hedonic Calculus, who can say off-hand that pleasures may not prove to have more than three dimensions?

The author's own final conclusion, as we should expect, is that "all knowledge is relative," but I am not clear in what sense he means to be understood. In one place he seems to mean that our knowledge is limited by the fewness and faultiness of our sense-organs. This is no doubt true, but does not prove anything as to the "relativity" of such knowledge as we have. An archangel, no doubt, knows more than I do,—but has he a different multiplication table from mine? Elsewhere I think Dr. Kühtmann commits the common fallacy of regarding the relation between knower and known as a causal one, *e.g.*, he seriously argues that because I don't see things when I shut my eyes, the presence of my eye must be a condition of the existence of what I see. Hence he treats the truism that there is "no object without a subject" as equivalent to the highly significant statement that nothing exists unperceived, and even goes so far as to speak of a rock which I see as "my presentative activity".

A. E. Taylor.

Kant's Gesammelte Schriften. Herausgegeben von der Königlich, Preussischen Akademie der Wissenschaften. Band xiv. Dritte Abtheilung: Handschriftlicher Nachlass. Erster Band. Mathematik-Physik and Chemie-Physische Geographie. Mit 66 Figuren. Berlin: Druck und Verlag von Georg Reimer, 1911. Pp. lxii, 637. Price, bound in half leather, 21 marks.

This is the first volume of the manuscript reflexions left by Kant. It contains the reflexions on mathematics, physics, chemistry and physical geography, and is very carefully edited by Dr. Erich Adickes. Further volumes are to contain the reflexions on anthropology, logic, metaphysics, moral and juristic philosophy and philosophy of religion (p. xxvi).

A special point (p. x) consists in references to works published at the time of Kant. Thus (p. 23) we get a little insight into Kant's mind as being occupied with the pseudo-problem which vexed some people in the period 1770-80 as to whether the circumference of a circle can be said to be at right angles to the radius when segments which are not infinitesimal in length are taken.

The mathematical reflexions, which are arranged in chronological order and are often detached calculations on stray bits of paper, appear to be on the simple metrical geometry of the circle (not, as the figure on p. 3 might suggest, on circular orbits) and the theory of parallels. Kant's reflexions on this theory are interesting because of the light they throw on his theory of mathematical knowledge. At that time mathematical science in Germany was at a low ebb; little or no original work was done, and a non-Euclidean Geometry was not contemplated. Kant characteristically has no doubt about the essential rightness of Euclid but wishes to make his theory of parallels more evident.

In the notes on arithmetic we meet again the well-remembered dots of Segner, which appear in the *Prolegomena.* On page 53 Kant implies that the theory of irrationals can only be founded geometrically.

In the reflexions on physics there is much of interest in connexion with the *Metaphysische Anfangsgründe*, but there seems to be no evidence even of a thorough study of Newton's *Principia.* Physics and chemistry, far more than mathematics, have only developed within the last 120 years, and Kant's contributions in this volume, which does not, of course, include the famous *Naturgeschichte des Himmels*, do not appear to be of much value.

Of the contributions to physical geography we are not qualified to speak: it is well known that this was a favourite subject of Kant's, and it is probable that his abilities lay more in the direction of natural science than of mathematics. In any case this volume, edited with so much pious care, rather confirms the estimate of Kant's mathematical attainments which one would conclude from reading his published works.

PHILIP E. B. JOURDAIN.

Kant's Ansichten über Geschichte und Bau der Erde. Von Dr. ERICH ADICKES, Professor der Philosophie an der Universität Tübingen. Tübingen: Verlag von J. C. B. Mohr (Paul Siebeck), 1911. Pp. viii, 207.

This tractate is a bye-product of Dr. Adickes' editorial activities in connexion with the mass of manuscript material on subjects of a scientific nature which the edition of Kant now publishing under the auspices of the Berlin Academy is in course of making available for the first time. It is also a preliminary study towards that full appraisement of Kant's

position as a man of science which Dr. Adickes allows us to look for in a near future. Kant's well-known speculations as to cosmic evolution, with their striking powers of synthesis and intuition, make it abundantly clear that the presentation of the scientific side of him is an integral part of any complete portraiture of the man and the philosopher. Apart from the publication, present and to come, of additional data, Dr. Adickes has advanced the possibility of such a presentation, by undertaking to indicate and to date the origination of Kant's various views on the formation of the earth and its surface, and any changes which those views subsequently underwent, and to determine the nature and extent of Kant's dependence upon contemporary writers. When did a doctrine as to the distribution of mountains over the earth's surface, or the nature of deserts or the effect of earthquakes first enter into Kant's teaching? If it was modified, how and in what sense was it modified? Was it original, or was he drawing in substance upon Buffon or Buache or upon one of a host of obscurer writers, among whom Prof. Adickes seems to move with familiarity, though they have long passed to a limbo from which there is no return? The answers tend to mark out Kant as learned rather than a pioneer of research, to show him dependent on others for the basic material which he then often shot through and through with ideas, to exalt his architectonic or constructive powers at the expense of that long patience which constitutes scientific genius. Flashes of insight and occasional marvels of construction there were, but a sense of controlled, because controlling, experience seems to have been lacking. If some such estimate as this should be Dr. Adickes' final verdict on Kant as a force in science, it must be remembered that Kant did not publish his lecture-notes, and that what he did publish on natural philosophy has a very definite value for its time and place. And that some have advanced science without having the scientific vocation.

HERBERT W. BLUNT.

Das Erkenntnisproblem in der Philosophie und Wissenschaft der Neueren Zeit. Von ERNST CASSIRER. I^{ter} Bd. 2te durchgesehene Auflage. Berlin: Verlag Bruno Cassirer, 1911. Pp. xx, 601.

Good wine needs no bush. This revision of Prof. Ernst Cassirer's *Das Erkenntnisproblem* calls for welcome, not for formal appraisement. Published in 1906-7 (reviewed in MIND, April, 1908), Dr. Cassirer's book at once won merited recognition for the wealth of learning and keen analytical power with which he sustained the broad Humanism that holds categories to be valid only in virtue of the function that they serve in knowledge, vindicated his refusal to separate philosophy and science, and traced the development of the method of knowledge in the history of thought from the Renascence to Kant. The work was already so good that it was certain that Dr. Cassirer would better it ere long.

Cassirer has now returned with his grip on his main positions strengthened by his important study on Substance and Function (noticed by Prof. A. E. Taylor in MIND, July, 1911) and has thoroughly recast his historical volumes. He has taken into account books and essays of the past five years, on Galilei, *e.g.*, and Leonardo, has made some concessions, such as so powerful a thinker can well afford to make, to the more sympathetic of his critics, and has dropped the section on Greek philosophy, in which field his competence is general, not special, and which was in any case too jejune to be effective. And for the second volume Cassirer promises a rewriting of the weak chapter on Gassendi—we could wish he had promised the same for Reid—and the much-needed index. It is

unlikely that the revised edition of a book worthy to stand beside Höffding's *History of Philosophy* will escape translation.

The interpolation of δόξα between sense and imagination (p. 101) is not sound Aristotelian doctrine.

References to the pagination of the original edition would have been welcome.

H. W. B.

William James als Religionsphilosoph. By Dr. K. A. Busch. Göttingen: Vandenhoeck & Ruprecht, 1911. Pp. 88.

The greater part of this well-meaning little book is taken up with a conscientious condensation of James's books, more particularly of the *Varieties of Religious Experience*, but the last nine pages attempt to appraise the religious value of James's philosophy and the truth and error in pragmatism, as they appear to one who is quite sure he has the absolutely true religion. This is, of course, an impossible task, and some of the results are curious. Pragmatism is censured for rejecting the formal notion of truth, because 'it cares *also* [!] for material truth'. But its notion is utterly inadequate for logic and science (p. 87), and indeed destroys the notion of logic, though it may work excellently for positive scientific research (pp. 81, 83). In virtue of this 'anti-rationalism,' however, pragmatism has great value for religion, for the understanding of which intellectualism is 'precious little good' (p. 84). Nevertheless the author sees that his antithesis between science and religion will not do, that the logical is also a value, and so he finally postulates a philosophy of values to include both. As however he is a follower of Rickert, he demands 'absolute' values, though he seems to think the mere formal claim to value a sufficient proof of absoluteness, and makes no attempt to explain why values should not be treated in an empirical psychological way. His knowledge of pragmatism is confined to James, whom, however, he misrepresents only when it is a question of (patriotically) saving the face of Kant. At least this seems to be his motive for accusing James of being 'uncritical' and ignorant of Kant, on the strength of the 'bric-a-brac museum' passage, which he quotes from the California address. Yet a few lines above James had explained that it was precisely *in the use of the critical method* that the British philosophers had anticipated Kant. Surely it is time that the Germans should credit foreigners also with ability to appreciate the meaning of Kant, to detect his contradictions, and to advance beyond him, and James, after superseding the whole foundation of Kantism in the psychology Kant had taken over from Hume, was fully entitled to speak as he did of the value of Kant's particular contribution to a 'critical' philosophy.

F. C. S. S.

La Psicologia Contemporanea. Guido Villa. Nuova edizione interamente rifatta. Torino: Fratelli Bocca, 1911.

Prof. Villa, with whose book in its English version, the 'Library of Philosophy,' has familiarised us, has been re-reading the makers of psychological history in the light of changed values brought about by the evolution in this and that theory. And filled with a most divine discontent and a quite extraordinary energy, he has decided that no patching or pruning of his original exposition would adequately set forth the evolution in his own personal equation. This involved, for his indomitable mettle, no brooding on the brevity of life, but a consigning to back

shelves a twelve-year-old work of 660 pages, and a reconstructive effort of the pen covering the whole ground again, and resulting in a re-adjusted purview occupying two-thirds of the original bulk. It is true there was the younger version, itself a re-written work, prepared for English readers (and I am not sure that versions in other languages have not appeared). But this year's addition to the family differs as much from the English version as from the original, except in its relative conciseness, however strong a family likeness appears in all. The opening chapter on the historical development of psychology is common to all the versions, but the somewhat less satisfactory genealogy of English theories of the original edition is adhered to, instead of that in the English version. The Methods of Psychology follow at once in chapter ii., not iv. Chapter iii. contains Structure and Functions of Psychical Life, being a re-cast of chapters v. and vi. of the English version. 'Mind and Body' are transferred to chapter iv., and chapter v., 'Object and Limits of Psychology,' is a re-cast of the second English chapter. The brief Conclusion is followed by an excellent Index of Subjects, and one of Names—a highly desirable terminal improvement, the earlier absence of which was a curious defect in a work of reference, and in which the misspelling of Tylor (as Taylor) and of Shaftesbury is not corrected.

Here is no space or fitting occasion to discuss the author's altered estimates. We still note that the historical development occupying his mind is at least as much the development of the metaphysical bases and inductions of psychological inquiries as that of the *scientific* inquiries themselves. The work might be quite as fitly entitled Philosophy of Contemporary Psychology. And this being so, some account might have been taken of the psychological developments taking shape in connexion with recent philosophy of perception in this country. Once more, the twenty-first century may cavil at the over-comprehensive title as less fitting than Contemporary Psychology in Europe and America would have been. But this reflexion belongs to the re-adjusted perspectives of the future. Meanwhile the psychological student owes a great debt to Prof. Villa's splendid energy thus to tell us *de novo* how the sphere of such inquiries is growing, and of how he is growing along with it all the time.

C. A. F. Rhys Davids.

Manuali Hoepli. Elementi di Etica. G. Vidari. Third edition, revised and enlarged. Milan: Ulrico Hoepli, 1911. Pp. xiv, 380.

An excellent little work which combines an ethical doctrine of "self-realisation," akin in spirit and often in language, to that of Green, and inspired, like the thought of Green, by the aim to present the essentials of Kantianism in a more concrete and, if I may use the phrase, deformalised version, with an acute historical, sociological and psychological analysis of the psychology of conduct. With almost the whole of the work the present reviewer is glad to find himself in hearty agreement and particularly with the careful and penetrating analysis of the psychological grades of sympathy and volition. Prof. Vidari treats of his subject in two books, of which the first, on "The Bases of Ethics" supplies the necessary historical, sociological and psychological preparation for the second, "The Doctrine of Morals". This book has again two parts, the first treating of the general character of the "good" or moral "ideal," which Prof. Vidari finds, like many of us, in human personality itself, the second (in which there is much useful discussion of contemporary moral and social problems), of the "moral life" as the struggle for the actualisation of the

good. His general attitude will be readily understood from the fact that he regards the "good" as ultimately consisting in the synthesis of "freedom" with "solidarity," as the all-important factors in human personality and that his last word on the subject of duty is this: "To develop and promote human personality may well be said to be the supreme exigency of life, and at the same time the supreme imperative of the universal order, or reality, as interpreted by idealism". The metaphysical implications of morality are left to be discussed in a brief appendix, since Prof. Vidari holds strongly that the discussion of them forms no part of the doctrine of morals, but is only in place when we reflect on the problem how the results of different sciences, already independently won, are to be united in a final philosophical theory of reality. In his conclusion as to what these implications are, he agrees closely with Kant, or perhaps even more with Green, since the highest postulate, apart from which a genuine absolute moral law is declared to be impossible, is that "the supreme ideal is the revelation in man of a universal Thought which penetrates Being and Life through and through until it finds the organs best fitted for its expression in human fellowship, in custom, in history, in the civic life. Then the ideal of human personality appears to us as a spark of this very universal Thought, a fragment of the supreme Reality." A good feature of the book is the addition to each chapter of a short bibliography, and it is pleasing to find recent British thought well represented in these lists.

A. E. Taylor.

Received also :—

B. Bosanquet, *The Principle of Individuality and Value*, the Gifford Lectures for 1911, delivered in Edinburgh University, Macmillan & Co., Ltd., London, 1912, pp. xxxv, 409.

B. Bosanquet, *Logic, or the Morphology of Knowledge*, two vols., second edition, Oxford, Clarendon Press, 1911, pp. viii, 384 ; xi, 327.

F. C. S. Schiller, *Formal Logic ; a Scientific and Social Problem*, Macmillan & Co., Ltd., London, 1912, pp. xviii, 423.

Josiah Royce, *William James and Other Essays on the Philosophy of Life*, New York. The Macmillan Co., 1911, pp. xi, 301.

A. T. Shearman, *The Scope of Formal Logic ; the New Logical Doctrines Expounded, with Some Criticisms*, London, University of London Press, published for the University of London Press Ltd., by Hodder & Stoughton, Warwick Square, E.C., 1911, pp. xiv, 165.

Clement C. J. Webb, *Problems in the Relations of God and Man*, London, James Nisbet & Co., Ltd., 1911, pp. xii, 288.

Harold P. Cooke, *Maurice, the Philosopher (a Dialogue), or Happiness, Love, and the Good*, with an introduction by Dr. F. C. S. Schiller, Cambridge, W. Heffer & Sons, Ltd., 1912, pp. xiii, 106.

Bertrand Russell, *The Problems of Philosophy* ("Home University Library"), London, Williams & Norgate, pp. viii, 255.

Robert Adamson, *A Short History of Logic*, edited by W. R. Sorley, William Blackwood & Sons, Edinburgh and London, 1911, pp. x, 266.

Charles Mercier, *A New Logic*. London, William Heinemann, 1912, pp. xxvii, 422.

Amelia Hutchison Stirling, M.A., *James Hutchison Stirling, His Life and Work*, with Preface by the Rt. Hon. Viscount Haldane of Cloan, T. Fisher Unwin, London, Adelphi Terrace : Leipsic, Inselstrasse, 1912, pp. viii, 379.

Ivor L. L. Tuckett, *The Evidence for the Supernatural ; a Critical Study made with "Uncommon Sense,"* London, Kegan Paul, Trench, Trubner & Co., Ltd., 1911, pp. 399.

George Malcolm Stratton, *Psychology of the Religious Life*, London, George Allan & Co., Ltd., Ruskin House, 44 and 45 Rathbone Place, 1911, pp. xii, 376.

W. Stanley Jevons, *The Theory of Political Economy*, with Notes and an Extension of the Bibliography of Mathematical Economic Writings, by H. Stanley Jevons, MacMillan & Co., Ltd., London, 1911, pp. lxiv, 339.

Lord Ernest Hamilton, *Involution*, Mills & Boon, Ltd., London W., 1912, pp. 384.

Prabhu Dutt Shāstrī, *The Doctrine of Māyā, In the Philosophy of the Vedāntā*, London, Luzac & Co. (Publishers to the Indian Office), 46 Great Russell Street, W.C., 1911, pp. xiv, 138.

Hubert Gruender, *Psychology without a Soul*, a Criticism, St. Louis, London, 1912, pp. xviii, 245.

James Lindsay, *New Essays, Literary and Philosophical*, William Blackwood & Sons, Edinburgh and London, 1912, pp. xvi, 184.

David Balsillie, *An Examination of Professor Bergson's Philosophy*, London, Williams & Norgate, 1912, pp. xii, 228.

Joseph Solomon, *Bergson* ("Philosophies, Ancient and Modern"), London, Constable & Co. Ltd., 1911, pp. 128.

Emile Boutroux, *William James*, Librairie Armand Colin, 5 Rue de Mezières, Paris, 1911, pp. 142.

Samuel Robertson Honey, *The Referendum among the English, a Manual of "Submissions to the People" in the American States,"* with an Introduction by J. St. Loe Strachey, Macmillan & Co., Ltd., London, 1912, pp. xxxv, 114.

Alfred Williams Momerie, M.A., *Personality, the Beginning and End of Metaphysics, and a Necessary Assumption in all Positive Philosophy*, reprinted from the fifth and last edition, London, H. R. Allenson, Ltd., Racquet Court, Fleet Street, E.C., pp. 89.

Rudolf Eucken, *Life's Basis and Life's Ideal, the Fundamentals of a New Philosophy of Life*, translated with Introductory Note by Alban G. Widgery, London, Adam & Charles Black, 1911, pp. xxii, 377.

Emile Boutroux, *William James*, translated from the Second Edition by Archibald and Barbara Henderson, Longmans, Green & Co., London, New York, Bombay and Calcutta, 1912, pp. vii, 126.

Twenty-seventh Annual Report of the Bureau of American Ethnology to the Secretary of the Smithsonian Institution, 1905-190 , Washington Government Printing Office, 1911, pp. 672.

Annual Report of the Board of Regents of the Smithsonian Institution, showing the Operations, Expenditures and Condition of the Institution for the year ending June 30, 1910, Washington Government Printing Office, 1911, pp. 688.

Henry Lagrésille, *Monde Moral : l'Ordre des Fins et des Progrès* [Le Fonctionnisme Universel], Paris, Librairie Fischbacher [Société Anonyme], 1911, pp. 517.

Th. Flournoy, *La Philosophie de William James*, Saint-Blaisé, Foyer Solidariste, 1911, pp. 219.

Albert L. Caillet, *Traitement Mental et Culture Spirituelle, la Santé et l'Harmonie dans la Vie Humaine*, Paris, Vigot Frères, Éditeurs, 23 Place de l'École-de-Médecine, 1912. pp. xiii, 399.

Dr. Viktor Kraft, *Weltbegriff und Erkenntnisbegriff, Eine erkenntnistheoretische Untersuchung*, Leipzig, Verlag von Johann Ambrosius Barth, 1912, pp. xii, 232.

Aenesidemus oder über die Fundamente der von dem Hern Professor Reinhold in Jena, gelieferten Elementare Philosophie von Gottlob Ernst Schultze, Besorgt von Dr. Arthur Liebert [*Neudrachte seltener philosophischer Werke, Herausg. von der Kantgesellschaft*, 1 Band], Berlin, Reuther & Reichard, 1911, pp. xviii, 351.

William Stern, *Die Differentielle Psychologie in ihren Methodischen Grundlagen*, an Stelle einer zweiten Auflage des Buches, über Psychologie der individuellen Differenzen [Ideen zu einer differentiellen Psychologie] Leipzig, Verlag von Johann Ambrosius Barth, 1911, pp. ix, 503.

Wilhelm Jerusalem, *Die Aufgaben des Lehrers an Höheren Schulen Erfahrungen und Wünsche*, Zweite, neu verfasste Auflage der Schrift, Die Aufgaben des Mittelschullehrers Wien und Leipzig, Wilhelm Braumüller, K. u. K. Hof und Universitats Buchhändler, 1912, pp. ix, 392.

Franz Brentano, *Aristoteles Lehre vom Ursprung des Menschlichen Geistes*, Leipzig, Verlag von Veit & Co., 1911, pp. viii, 165.

Dr. Friedrich Boden, Hamburg, *Die Instinktbedingtheit der Wahrheit und Erfahrung*, Berlin, Druck und Verlag von Leonhard Simion, Nf., 1911, pp. 80.

Philosophische Betrachtungen, Fragmente aus dem literarischen Nachlass von Gustav Levinstein, Berlin, S.W., 48, Verlag von Leonhard Simion, Nf., 1912, pp. 99.

Antonio Aliotta, *La Reazione Idealistica contro la Scienza*, Opera premiata dalla Società Reale di Napoli, Palermo, Casa Editrice, "Optima," 1912, pp. xvi, 526.

Dr. William Mackenzie, *Alle Fonti della Vita Prolegomeni di Scienza e d'Arte per una Filosofia della Natura*, con sei Tavole Fuori Festo due in nero e quattro a colori, 1912, A. F. Formiggini, Editore in Genova, pp. 387.

VIII.—PHILOSOPHICAL PERIODICALS.

Philosophical Review. Vol. xx., No. 4. **G. T. Ladd.** 'The Ontological Problem of Psychology.' [Ontological speculation is often dismissed by scientific men as unfruitful; the author argues, with special reference to the category of substance, that it is inescapable in physical science and is very directly bound up with the progress of psychology. In physics, it is true, the reduction of matter to a 'that which,' or to an all-embracing ether, has resulted in the *aporia* of appearance and reality; we arrive at a system of ideas, mutually determining in an empty shell of space and time, and compelling us to believe that we think them—though they are independent of our thought—as they really are and as they verily perform. Why should we not accept the conclusion that "to be both the active subject and the suffering object of characteristic forms of energy, under the conditions of time and space," *is* to be really existent? In psychology, the difficulty here recognised does not exist; for to the Self all its 'appearances' are expressions of its 'reality'. It follows that the advance of psychology (by the use of scientific method, by the concept of genesis, by a right understanding of multiple personality, etc.) means a real progress also in the metaphysics of psychology.] **J. E. Boodin.** 'Knowing Things.' [(1) We try to unlock the reality of things by means of their qualities, the constant and describable ways in which we must take nature in its concrete contexts. These qualities are positively and negatively defined: they are or constitute the thing; they are not created by human nature, though this is an indispensable condition of their significance; they are not metaphysically final. (2) The importance of qualities is not absolute, but relative to present purpose; they are certain permanent expectancies which we can have with regard to things under definite conditions; they must be taken as objective whenever they enable us to identify and predict the things with which we have to deal. (3) They are not to be confused with sensations, since they are qualifications of a certain interest in the world as sensed; nor (4) with relations, since our taking a quality in various contexts does not *eo ipso* alter the quality; nor (5) with values, since these depend on the will for their existence, while qualities depend on it only for their significance.] **A. H. Jones.** 'Professor Pringle-Pattison's Epistemological Realism.' [Prof. Pringle-Pattison offers the complementary doctrines of metaphysical monism and epistemological realism as the truth of classical dualism. Indirect proof of the existence of objects is found in instinctive and universal belief, and in the failure of alternative theory (idealism) to explain experience; indirect proof of the validity of knowledge in the leading of any other hypothesis to scepticism. The writer argues that the appeal to metaphysical monism does not overcome the difficulties inherent in historical dualism; and that the disjunction upon which the indirect proofs are based would not be recognised as valid by any idealist. In detail, the category of correspondence is applicable neither to perception nor to conception; reality must be sought in and not outside experience; our theory of the nature of experience must be organic or functional, not

existential.] Reviews of Books. Notices of New Books. Summaries of Articles. Notes. Vol. xx., No. 5. **H. H. Joachim.** 'Plato's Distinction between "True" and "False" Pleasures and Pains.' [Common opinion, and many traditional arguments for and against hedonism, assume that there is a radical difference between feeling and such experiences as knowing and willing. For these divide into act and content, a *that* and a *what;* and while the act is certain and actual, the content may be true or false, good or bad, real or illusory; whereas feeling has no *what* distinguishable from its *that;* feelings are just the sheerly actual feeling-pleased and feeling-pained; there is no qualitative differentiation of pleasures or of pains. The writer attacks both positions. The *disjuncta* in knowing and willing are essentially correlative; variation of the one necessitates variation of the other; the supposed unassailable certainty of the bare act is a mistake. And feeling, like knowing and willing, shows both act and content; 'fact of the feeling' and 'somewhat felt' are correlative, inseparable and reciprocally conditioning moments. But is not, nevertheless, the 'whole experience' in feeling non-relational? Possibly, in rapture and agony; though even here differences of reality and illusoriness may be made out. Certainly not in ordinary pleasures and pains; everyday speech bears direct witness against such a view, and the reduction of feeling to an adjectival 'colouring' of other experiences is anything but scientific. Plato's question is therefore not easily dismissed, but appears rather as of high importance.] **W. B. Pillsbury.** 'The Rôle of the Type in Simple Mental Processes.' [Perception is not adequately described either as group of sensations or as complex of responsive movements. The mental life took shape as a process of interpretation, by way of trial and error; working hypotheses sprang up spontaneously, were modified or confirmed, and finally, as what the author terms 'types,' acquired a form adequate to experience. When organised and fully developed, the type becomes the real; the system of types is the system of knowledge, and this is the universe of ultimate reality. As psychological datum, the type may be a transformed and corrected image, or a consciousness dependent on more or less explicit reference to (partial recall of) the different experiences and uses that gave rise to the type. In perception, we have as types things, space, time, relations. In memory, we have the general principle; to understand is to refer to types; and the reference makes learning easy, makes it permanent, and ensures recall on the proper occasion. Recognition is effected by reference to a familiar event that by repetition and cross-connexion has become a type. Reasoning goes on by aid of the type of types, the concept. Actions are organised into useful and consistent groups, which are touched off by thinking of some typical end. In short, "Mind can be understood only with reference to organisation and the resulting types and system".] **A. Lalande.** 'Philosophy in France, 1910.' [Chiefly concerned with four works: two metaphysical, J. J. Gourd, *La philosophie de la religion,* and C. Dunan, *Les deux idéalismes;* and two ethical, J. Delvolvé, *Rationalisme et tradition,* and D. Parodi, *Le problème moral et la pensée contemporaine.*] Reviews of Books. Notices of New Books. Summaries of Articles. Notes. Vol. xx., No. 6. **O. Ewald.** 'German Philosophy in 1910.' [The neo-Kantian movement (Liebmann *Festschrift;* Cassirer, *Substanzbegriff u. Funktionsbegriff*) is tending through Fichte (Rickert, *Vom Begriff d. Philosophie;* Fichte's own works) to Hegel (Natorp, *Die logischen Grundlagen d. exakten Wissenschaft;* Ebbinghaus, *Relativer u. absoluter Idealismus; cf.* Windelband, *D. Erneuerung d. Hegelianismus*). To note further are the anti-psychologistic works of Uphues; von Hartmann's *System;* the historical studies of Wolff by Pichler and of Bolzano by

Bergmann; Simmel's *Hauptprobleme;* Jodl's *Aus der Werkstatt d. Philosophie;* the journal *Logos,* and the composite work *Weltanschauung.*] **T. de Laguna.** 'The Externality of Relations.' [(1) That relations in general form no part of, are external to, the essential nature of all realities is clearly false (*cf.* mathematics); on the other hand, that some relations are inessential to some real beings is plainly true, provided that 'inessential' have any acceptable meaning at all. (2) That relations are external to the 'qualities' of a thing is, again, a vain presumption; though there is no reason to think that every relation is bound up with every quality. (3) The mutual independence of relations is a matter of more or less, which must for the most part be empirically determined. It follows that no single answer can be returned to the question: Are relations external? All depends upon what is meant. An appendix discusses the prior question of the distinction between 'essential' and 'non-essential'. 'Essential' may be relevant to purpose, to the definition or discrimination of a concept, or to a reality (*i.e.*, to a final concept of the reality). In the present paper it has been used in the third meaning.] **W. K. Wright.** 'The Psychology of Punitive Justice.' [Resentment cannot be the source of punitive justice; for resentment arises only when some other impulse is thwarted—self-assertion, acquisition, sex, the gregarious instinct. Most important is the gregarious instinct, which works both ways: it arouses resentment against the offender, and also tender emotion in his favour; hence the *lex talionis.* At a higher stage of culture the idea of forgiveness emerges, still on the same instinctive basis; the immediate and personal response to injury is resentment, but a refined and strengthened gregarious instinct has grown into the moral mandate to feel and act with and for the group; social pressure conquers individual inclination; we are in presence of the 'reformatory' theory of punishment. It is to be noted, however, that as the theory has an instinctive ground, so it has definite psychological limits; some crimes can never be brought under it. The 'deterrent' theory, similarly, has its root in instinct; in emphasising the protective function of punishment it simply interprets the meaning and function of the instinct involved. This theory dominates public opinion to-day; and it too has its psychological limitations; it applies only where resentment is felt. Progress will consist in its assimilation by the reformatory theory.] Reviews of Books. Notices of New Books. Summaries of Articles. Notes.

Psychological Review. Vol. xviii., No. 2. **W. B. Pillsbury.** 'The Place of Movement in Consciousness.' [The motor theory is right in emphasising the part played by kinæsthetic qualities in every domain: in the process of perception, in memory and the higher intellectual operations, and on the active side in the organisation of experiences into systems of knowledge. It has shifted our ideal of explanation from the isolated mental process to such things as interrelation, context, attitude. On the other hand, not all conscious qualities are motor; and what is of motor origin comes, not directly from the motor cortex, but indirectly by way of kinæsthetic sensations (Cushing). Movement cannot be made responsible for the selection of conscious processes; nor has it meaning, in its own right; it acquires meaning. To identify the motor theory outright with functional psychology is to reduce functions to new and inadequate structures. Finally, movement cannot be regarded as the cause of the antecedent conscious states. In fact, consciousness is always an organised system, made up of sensation understood with reference to movement, and of movement in the light of and under the control of sensation.] **J. E. W. Wallin.** 'Experimental Studies of Rhythm and Time.—I. Qualitative Limens or Grades of Rhythm, and the Differ-

ence Limen in the Perception of Time.' [(1) Five grades or qualities of rhythm may be distinguished, in terms of the amount of temporal irregularity introduced in the beats of an objectively rhythmical series (duple rhythm, trochaic and iambic ; length of rhythmical unit 1·075 and 0·57 sec., of tones, 0·179 and 0·095 sec., respectively ; discontinuous and continuous method) : excellent, good but somewhat shaky, medium, poor or very jerky, disrupted. These grades or rhythm limens are amenable to Weber's Law, the numerical constant being 1/3 ; they are bands, or temporal spans, and are separated by narrower interliminal spans. They are smaller for the trochaic than for the iambic pattern, and introspection gives the trochee the advantage on the score of æsthetic satisfaction. (2) A change in time is apprehended earlier than a change in rhythmical quality ; and the temporal limen is an edge or line, not a span. The perceptions of time and of rhythm are thus not identical processes. The limens are slightly smaller for the trochaic measure. They average about 5 per cent. of the interval length.] **H. L. Hollingworth**. 'Experimental Studies in Judgment.—I. Judgments of the Comic.' [Ten observers sorted thirty-nine jokes into ten piles, according to 'degree of funniness,' five times over. (1) *Judgment*. At first, individuals agree more closely on the good than on the poor, but with successive repetitions this difference disappears ; on the other hand, a given individual is, on the average, more certain of his judgments in the lower sections. Further, a large individual variability is correlated directly with approximation to the group-average. In several kinds of judgment involving affective discrimination, the evidence shows that there are only four distinct grades of merit in the material on which a group of observers will in the long run agree. (2) *Adaptation*. If we group the jokes by the persistence of their effect, we find a waxing group (naïve jokes, calamity-jokes with self-induced predicament), a waning group (retort, pun, wit, caricature, occupation-jokes), and a static group (unclassifiable, *naïveté* of the order of the pun, calamity-jokes with other-induced predicament). (3) *Theory*. The waxing group accords with Schauer's category of the objective-comic, the waning group with his subjective-comic, while the static group contains both elements.] **H. James, Jr.**, and **E. B. Holt**. 'A List of the Published Writings of William James.' Editorial Announcement. [International Psychological Congress of 1913.] Vol. xviii., No. 3. **R. Dodge**. 'A Working Hypothesis for Inner Psychophysics.' [The doctrine of psychophysical parallelism (which the writer does not define) makes against the development of an inner psychophysics : it diverts us from the search for the peculiar characteristics of the nervous processes which appear necessarily to condition consciousness ; it fails to tell us why supraliminal intensities alone have conscious correlates ; it breaks down when we try to make it concrete in terms of force, work, fatigue, inhibition, etc. ; and by its implied *Ignorabimus* it forbids any estimate of the kind of organic integration that might approximate consciousness as we know it. If we attempt such an estimate, we arrive as a working hypothesis at the principle of apperceptive integration (Erdmann), which names a complex reproductive process, occurring at every moment of developed consciousness, in which the present nervous excitation (so far as consciously effective) directly arouses and fuses with the residua of like past excitations, while it also arouses indirectly the residua of past excitations with which it has been connected. This principle is adequate to the organisation of consciousness, *e.g.*, to the functional unity of our personal consciousness, and applies in clear-cut form to the problems of animal consciousness ; it also accords with the neuron theory of the nervous system. As to the ultimate question of the stuff of consciousness, we can only say that it is a logical

accident; any stuff in the universe, rightly integrated, would constitute a kind of consciousness.] **V. A. C. Henmon.** 'The Relation of the Time of a Judgment to its Accuracy.' [Judgments of the length of lines. (1) The time of judgment increases uniformly as the degree of confidence decreases. The time of wrong judgments is on the average longer, and is more variable, than that of right judgments; there seem, however, to be two types of wrong judgments, the overhasty and the prolonged. (2) Individual differences show in range of variability, in accuracy of discrimination (2 : 1), in time of judgment (1/3 to 1 sec.), and in degree of confidence (10 per cent. to 90 per cent. of perfect confidence in 500 trials). Degree of confidence is positively correlated with accuracy, but is not a reliable index; observers who judge quickly are neither more or less accurate than those who judge slowly; there are no significant sex-differences in accuracy, in time, in confidence, or in the correlations of these.] **J. E. W. Wallin.** 'Experimental Studies of Rhythm and Time.—II. The Preferred Length of Interval (Tempo).' [With objectively similar metronome beats (method of paired comparisons) the preferred tempo for all observers averaged 0·519 sec.; a rate of 0·50 to 0·60 sec. may be accepted as the most probable value. However, preference is conditioned upon many and varied factors, so that a norm can hardly be established. There is no definable relation between preference of tempo and musical capacity. Timing the spontaneous responses to music in theatres gave a preferred tempo of 0·51 sec. (probable value, 0·41 to 0·70 sec.), which agrees well with the experimental results.]

American Journal of Psychology. Vol. xxii., No. 3. **S. E. Barnholt** and **M. Bentley.** 'Thermal Intensity and the Area of Stimulus.' [It has often been observed that large surfaces are sensed as colder or warmer than small surfaces of the same temperature. This result is not a matter of summation of sensations from a number of temperature-organs; for work with determinate temperature-spots shows that the intensity of sensation depends primarily on the most highly tuned of the organs involved. The co-operating factor is not adaptation, which can be eliminated by the successive stimulation of different areas; or sense-feeling, since indifference may be secured by the use of small areas and moderate intensities of stimulus; or such organic concomitants as shiver or visceral displacement; or a confusion of thermal intensity with extent or with pressure, since this is avoided by practice under definite instructions; or inequality of thermal tuning, since a large area of low tuning can be made sensibly equal to a small area of high responsiveness. It is found in the more favourable conditions afforded by the larger stimulus for conduction from the bodily surface to the temperature-organs.] **E. Jacobson.** 'Consciousness under Anæsthetics.' [Report of consciousness during a 16 min. anæsthesia induced by nitrous oxide and air. The author concludes that the higher intellectual functions, if they are habitually employed in the normal life, may under these conditions persist even after vision and other lower functions, psychical and physiological, have gone. He also urges that the surgical criteria of lack of consciousness are unreliable; we may assume it in the case of activities which, in the normal life, are incapable of conscious initiation or may go on without conscious attendance; but other activities (talking, struggling) may have been conscious, even if the patient has no memory of them on arousal. Whether slight consciousness should be permitted, in prolonged operations, is of course a matter for the surgeon alone to determine.] **A. de V. Schaub.** 'On the Intensity of Images. [Report of experiments on images of tone, noise, weight, and light. All observers agree

that these images possess the attribute of intensity; the memory image is often an exact intensive reproduction of the sensation, whether this were weak or strong; the image of imagination, though usually of moderate intensity, may on occasion be very strong or very weak; the type-image is almost always of medium intensity. The scale of imaginal intensity begins at a point lying at least as low as the first term of the sensory scale; whether it extends to the terminal stimulus is doubtful. The attribute appears to be identical for image and for sensation, so that these processes are intensively interchangeable; their difference lies rather in texture and context; the images are thin, incomplete, abbreviated, without kinæsthetic setting.] **S. P. Hayes.** 'The Colour-Sensations of the Partially Colour-Blind; a Criticism of Current Teaching.' [After a review of the historical cases of monocular (red-green) colour-blindness, the author gives a very full account of a new case of monocular protanopia. The defect described by von Hippel in 1880 is almost certainly red-green blindness (deuteranopia); the remaining cases reveal nothing but meagre experimentation, glaring contradiction, and theoretical bias. Hayes finds his subject to be undoubtedly a protanope, and not an anomalous trichromate; yet she sees green as well as blue and yellow; the sensitivity is slightly subnormal, most markedly so for green, but the sensation of green is present. The tests include colour confusions (Nagel cards, etc.), colour discrimination (Hegg pigments, etc.), experiments with spectral lights (colour limen, etc.), colour equations (Hering's apparatus, etc.); at various parts of the investigation the author had at his disposal one other protanope and nine deuteranopes (all binocular cases). His conclusion is that "many intermediate or transitional stages and degrees of abnormality may be found to exist between dichromatism and normal colour-vision, and that these intermediate forms need not be identical with anomalous trichromatism".] **R. Acher.** 'Recent Freudian Literature.' [Abstract of fourteen publications, including Freud's study of da Vinci, Pfister's of Zinzendorf, Sadger's of Lenau, and Abraham's of Segantini.] **K. Dunlap.** 'Terminology in the Field of Sensation.' [A plea for uniformity, with suggestions.] Book Reviews. Book Notices. Note. **B. F. Underwood.** 'Dr. Edmund Montgomery.' Vol. xxii., No. 4. **E. Jones.** 'The Psychopathology of Everyday Life.' [An illustrated account, on Freudian principles, of forgetfulness, *lapsus linguæ* and *calami*, misprints, false recognition, the mislaying of objects, unintentional and casual actions,—topics treated in Freud's *Zur Psychopathologie des Alltagslebens*. Psycho-analysis shows that there is always a psychical cause of the occurrence, a motive, which may be foreconscious, unconscious, or compounded of both foreconscious and unconscious factors. The motive is repressed by the subject, the repression being a mechanism of defence. It is either a counter-impulse, making directly against the intended mental operation, or an impulse directed against a mental tendency associatively connected with the operation. Its repression constitutes a temporary failure or error of normal mental functioning, which may be compared psychologically with a psycho-neurotic symptom. The author discusses at length the warrant for psycho-analytic interpretation; argues that an understanding of everyday mistakes throws light on psychical determinism, the deeper motives of conduct, and the range of affective influences on judgment and decision; and believes that their appreciation is socially important, as bearing upon the mutual misunderstandings of daily life.] **J. E. Downey.** 'A Case of Coloured Gustation.' [The subject of this study, an undergraduate, has normal olfaction; his sensitivity to taste is probably defective, as he places great reliance upon tactual differences in 'taste,'

although the point cannot be established without an experimental separation of taste proper from touch. The taste-colours are enhanced by concomitant sensations of smell; they cannot, however, be classified on an olfactory basis, while they can, to a certain extent, be correlated with the four taste qualities. They are sensational, not imaginal in character. They are, on the whole, indifferent; there has been no æsthetic organisation of tastes on the ground of colour. The writer suggests, tentatively, that the colours may be derived from those of the sources of taste; but the suggestion cannot be generalised. The subject gives indications of synæsthetic association of touch and colour (in both directions); he has, save in exceptional cases, no coloured hearing.] **E. B. Titchener.** 'A Note on the Consciousness of Self.' [Psychology may not be defined as 'the science of the self as conscious'. Self-consciousness appears, in many cases, as an intermittent mode of conscious experience. Like other conscious attitudes it takes shape, explicitly or implicitly, under determination; this, in the observations recorded, is usually of a social nature.] **E. Jacobson.** 'On Meaning and Understanding.' [Experiments, by the 'method of examination,' on the perception of single letters, the understanding of words, and the understanding of brief sentences. A novel feature of method is the requirement from the observer of a twofold report, the one covering mental processes in the ordinary psychological sense (imageless thoughts included), and the other covering the meaning or objective reference of the presented stimuli. It was found that process-report and meaning-report run parallel to each other, and express different attitudes of the psychophysical organism. No imageless process was noted; and the author suggests that the imageless meanings, relations, thoughts, awarenesses of the Würzburg school are therefore not processes on a par with sensation and image, alternating with these in a given experience, but are rather renderings of experience from a point of view which excludes processes.] Minor Studies from the Psychological Laboratory of Vassar College. **D. Clark, M. S. Goodell, M. F. Washburn.** 'XVI. The Effect of Area on the Pleasantness of Colours.' [Shades, and to a lesser degree tints, are preferred in large area (625 cm.^{2}); saturated colours, with the single exception of red, are preferred in small area (25 cm.^{2}).] **D. Crawford, M. F. Washburn.** 'XVII. Fluctuations in the Affective Value of Colours during Fixation for One Minute.' [In general, the tendency of associated ideas is to raise the pleasantness of a colour, that of adaptation is to lower it. In detail, association favours tints; slightly favours saturated colours; favours among shades R, O, G, V, does not affect B, and affects Y variously. Adaptation is unfavourable to tints; among saturated colours favours G, B, V, is hurtful to R, Y, and does not affect O; acts variously upon shades. The work was done with small squares of the Milton Bradley papers.] **W. T. Shepherd.** 'Imitation in Raccoons.' [Experiments with four animals, seven months old, trained for various tests but (with one exception) new to tests of the present kind, gave no evidence of inferential imitation, involving ideation. The results accord with those of previous observation.] **E. B. Titchener, L. R. Geissler.** 'A Bibliography of the Scientific Writings of Wilhelm Wundt.' [Third supplementary list.] Book Reviews. Book Notes. Subject Index.

JOURNAL OF PHILOSOPHY, PSYCHOLOGY AND SCIENTIFIC METHODS. viii., 10. **T. H. Robinson.** 'The Spirit of Conservatism in the Light of History.' [A well-written paper urging that whereas the study of history has generally made for conservatism, conservatism is really condemned by history "as a hopeless and wicked anachronism," and that whereas

the radical "has hitherto appealed to the future, now he can confidently rest his case on past achievement and current success". "The long-sought sin against the Holy Ghost" may be "the refusal to co-operate with the vital principle of betterment."] **R. M. Ogden.** 'The Sixth Annual Meeting of the Southern Society of Philosophy and Psychology.'—viii., 11. **A. H. Lloyd.** 'The Logic of Antithesis.' [Treated under the rubrics, mutual reproduction, duplicity of meaning, identity of opposites, serial mediation, difference at once in kind and degree, dimensional difference, and parallelism in all difference.] **I. W. Riley.** "*Continental Critics of Pragmatism. II. Italian.*' [Chiappelli, Aliotta, Cesca.] **C. E. Ferree** and **M. G. Rand.** 'An Experimental Study of the Fusion of Coloured and Colourless Light Sensation: The Locus of the Action.' [Brightness affects Colour by reducing its saturation and changing the quality or tone of certain colours.] **J. E. Creighton.** 'The Fourth International Congress of Philosophy.'—viii., 12. **C. J. Keyser.** 'The Asymmetry of the Imagination.' [A good example of 'mystical mathematics'.] **R. B. Cooke.** 'The Theistic Readjustment of Idealism.' [A criticism of Howison, concluding that a static pluralism cannot entertain a personal God.] **D. S. Miller.** 'Is Consciousness "a Type of Behaviour"?' [A reply to Singer in viii., 7, insinuating that the new realism believes that "the proper method is to come to conclusions, and then to brace ourselves to meet the problems whose solution alone could warrant any conclusion".]—viii., 13. **W. H. Winch.** 'The Faculty Doctrine, Correlation and Educational Theory.'—I. [Points out that educational practice must differ according as a greater or less degree of unity is ascribed to the mind.] **K. Dunlap.** 'Rhythm and the Specious Present.' [Supposes that rhythm is due to a periodic elongation and contraction of the specious present.] **S. A. Elkus.** 'Mechanism and Vitalism.' [Criticises Driesch.]—viii., 14. **D. Drake.** 'The Inadequacy of "Natural" Realism.' [Points out that natural realism does not explain the 'subjective' side of experience and desiderates a 'critical' realism.] **W. H. Winch.** 'The Faculty Doctrine, Correlation and Educational Theory.—II.' [Decides for a 'modified' faculty doctrine, and concludes that "in the things we need to know for practical purposes, learning, imagining and reasoning about them, will itself supply much of the training" necessary.]—viii. 15. **J. Dewey.** 'Brief Studies in Realism.—I.' [Presentative realism differs from naïve in taking perceptions as cases of knowledge; but this enables the idealist to ascribe to him the belief that the perceived is real object and thence to prove that if so objects must be mental. He is further aided by the fact that for practical purposes perceptions are often used as cases of knowledge, *viz.*, as signs of other perceptions. Really, perceptions ought to be taken just as natural events.] **J. B. Pratt.** 'Peter's Toothache Once More.' [Requires pragmatism to account for the case of a judgment which is never verified but yet corresponds with its object; apparently it has to deny that the supposition is legitimate, and this leads to solipsism.] **A. W. Moore.** 'Reply' [Pratt can see no connexion between the origin, intent and nature of judgments and their 'truth'. The 'problem' of the 'true but unverified judgment' is one of the intellectual surds which pragmatism abolishes.]—viii., 16. **G. Santayana.** 'Russell's *Philosophical Essays.*—III. Hypostatic Ethics.' [A brilliant and amusing, but very scathing, criticism of Russell's ethics, likening it to a "Calvinistic God," who "has lost his creative and punitive functions, but continues to decree groundlessly what is good and what evil, and to love the one and hate the other with an infinite love or hatred. Meanwhile the reprobate need not fear hell in the next world, but the elect are sure to find it here."] **E. N. Henderson.** 'Do we Forget the Disagreeable?'

[Disputes the conclusions of—vii., 26.] **W. T. Bush.** 'The Problem of the Ego-Centric Predicament.' [Neither realism nor idealism can infer anything from it.]—viii., 17. **M. W. Calkins.** 'The Idealist to the Realist.' [Denies that recent criticisms of realists are cogent, and complains that their 'platform' gives no positive hint as to where they stand.] **E. B. McGilvary.** 'Professor Dewey's "Action of Consciousness".' [Questions on a footnote in one of Dewey's papers.] **R. S. Woodworth.** 'New York Branch of the American Psychological Association.'—viii., 18. **W. T. Marvin.** 'The Existential Proposition.' [There are two types (1) of the form p implies q where p is asserted and $\therefore$ q is asserted; (2) of the form q is asserted, p implies q, $\therefore$ p is asserted.] **H. L. Hollingworth.** 'New York Branch of the American Psychological Association.'—viii. 19. **H. T. Costello.** 'External Relations and the Argument from Missouri.' [The challenge 'show me a relation which makes no difference to its terms' should not be accepted by the believer in external relations.] **E. B. McGilvary.** 'Experience as Pure and Consciousness as Meaning.' [Criticises James's and Woodbridge's denials that experience is constituted by the subject-object relation.]—viii., 20. **M. R. Cohen.** 'The Present Situation in the Philosophy of Mathematics.' [On 'logistic' lines, and ending with the declaration that "the fundamental difference among philosophers is still the question, Plato or Protagoras?" Unfortunately the writer is quite unaware of the difficulties about identifying the conventional 'Protagoras' with the Platonic, and *a fortiori* with the real, and clearly does not understand Poincaré.] **J. Dewey.** 'Brief Studies in Realism.—II. Epistemological Realism: the Alleged Ubiquity of the Knowledge Relation.' [If this ubiquity is assumed, the issue between epistemological realism and idealism resolves itself into the absurd question whether knowledge makes any difference to things already in the knowledge relation, and either both parties are saying the same thing in different words or else both depart from their common premiss, that to be a mind is to be merely a knower. This too is why neither can understand the pragmatic realist, for whom knowing is only a special case of the behaver-enjoyer-sufferer situation.]

Zeitschrift für Psychologie. Bd. lviii., Heft 3 und 4. **A. Feuchtwanger.** 'Versuche über Vorstellungstypen.' [(1) Experiments by the direct method of systematic introspection brought out certain general results, as that auditory ideas are, for all observers, less frequent than visual ideas or reactions of internal speech; and that auditory ideas are more frequently verbal than objective. They showed, further, that various forms of stimulus have different test-values: thus, the verbal-visual type appears clearly in reactions to heard syllables, words and sentences, in the hearing and answering of questions, and in associations; obscurely in loud and silent reading, and in writing from copy; not at all in the visual perception of ornaments and pictures. A definite pre-adjustment of attention to tactual-motor or visual reactions did not noticeably increase the number of these reactions. The visual observer could voluntarily arouse visual ideas more clearly, easily and quickly than the auditory-motor observer; and this observer, in turn, had a like advantage in the matter of auditory and tactual ideas. (2) The indirect methods of impression and reproduction, and of distraction (modified form of Eckhardt's method), gave results which tallied with those of the direct method. Kraepelin's method (writing out of names of coloured objects and of sounds during a set time) correlated less well with the direct method; it may, however, be applied if the instruction compels the observers actually to call up the ideas whose names they are writing (tested for objective visual ideas of form, magnitude and colour, and for

verbal auditory ideas).] **W. Poppelreuter.** 'Beiträge zur Raumpsychologie. I. Mathematische Theorie des Wahrnehmungsraumes. Quantitativer Vergleich der binokularen und monokularen empirischen Raumwahrnehmung.' [Outline of a theory of perceptual space on the basis of the proved adequacy of the visual directions; critique of Hillebrand. Experimental results: (1) It is impossible to ground an experienceable perceptual space solely on binocular parallax (Hering, Hillebrand). (2) The influence of binocular parallax cannot be (at least, has never been) experimentally isolated. (3) Where numerous empirical space-factors are involved, the difference of relief in monocular and binocular 'avenue' observations (*Allee einstellungen*) is quantitatively small. (4) The effect of binocular parallax is to enhance spatial relief. (5) The empirical space of monocular vision is (save where very numerous empirical factors are involved) more labile than that of binocular vision: narrowing of attention more easily reduces the relief-effect, and the factors lose their efficacy in course of the experiments. (6) The adverse influence of reduction of the empirical space-factors is far greater for monocular than for binocular consideration of relief.—An Appendix describes and figures a 'universal' optical bench for experiments on space.] **N. Ach.** 'Willensakt und Temperament: eine Widerlegung.' [Reply to review by Selz.] Besprechung. [Kappers on Brodmann, Vergleichende Lokalisationslehre der Grosshirnrinde in ihren Prinzipien dargestellt auf Grund des Zellenbaues.] Literaturbericht. IV. Internationaler Kongress für Philosophie. Das psychologische Institut des Leipziger Lehrervereins. Bd. lviii., Heft 5 und 6. **C. Stumpf.** 'Konsonanz und Konkordanz: nebst Bemerkungen über Wohlklang und Wohlgefälligkeit musikalischer Zusammenhänge. [In this paper, Prof. Stumpf bridges the gap between psychological acoustics and musical theory by a doctrine of 'concordance' which, while implicit in many of his previous writings, has not before received explicit formulation. Consonance and dissonance are for Stumpf, as we know, in the last resort matters of degree of tonal fusion; and fusion (*Verschmelzung, Durchdringung*) is the given sensory blend resulting from the presentation of two simultaneous tones; it is invariable for a tonal pair, whatever other concurrent tones are added, and it is independent of analysis. Consonance and dissonance differ, therefore, only in degree of sensible unitariness. The musical principle of concordance, on the other hand, may be stated thus: Find the greatest number of tones, within the octave, that are all consonant with one another, as you travel in the scale from below upward, and pass at every step from stronger to weaker degrees of consonance. On this principle, every concordant chord, or concord, must contain a fifth (or its inversion, a fourth) and a third (or its inversion, a sixth); and, similarly, discordant chords or discords are chords that arise from triads by the addition of other tones, rationally justified, or by change of certain of the triad-tones themselves. The principle is explained in some detail; it evidently accounts for the triad-basis of music. It follows that, if consonance is a matter of direct sensible perception, concordance implies apprehension and thought-relation; if consonance and dissonance differ only in degree, concordance and discordance differ specifically, as either-or; consonance holds primarily of two, concordance of three, simultaneous tones; consonance is invariable, concordance may be changed to discordance by the addition of another tone. Turning to the affective side, the author distinguishes sharply between the direct sense-feeling of a tonal complex, the 'affective sensation' which accompanies it, and the intellectually mediated 'true feeling,' of which none but the musically trained are capable; he assumes that this latter has, in the course of a few centuries, reacted upon the former, in such a way

that marked shifts and intensifications of sense-feeling have resulted.] **A. Höfler.** 'Zwei Modelle schematischer Farbenkörper und die vermutliche Gestalt des psychologischen Farbenkörpers.' [Account, with coloured figures, of the models used in the *Hundert psychologische Schulversuche* of Höfler and Witasek. Critical remarks on the form of the colour pyramid.] Literaturbericht.

Archiv f. d. Gesamte Psychologie. Bd. xx., Heft 1. **E. Rignano.** 'Über die mnemonische Entstehung und die mnemonische Natur affektiver Neigungen.' [The affective tendencies, which manifest themselves subjectively as wish, craving, need, and objectively as movement or tendency to movement, may be referred to the fundamental tendency of all organisms to retain or resume their physiological equilibrium, or (where this is impossible) to establish a new equilibrium in harmony with new conditions (adaptation). This, however, is to declare that all affective tendencies are mnemonic in origin and nature; every elementary physiological state leaves behind it a 'specific accumulation,' which is henceforth the vehicle of a tendency. The specific (visceral) character of the affective tendency may be masked by the operation of two mnemonic laws: that the part gradually acquires independence of the whole (brain replaces soma), and that the part may take the place of the whole (affective transfer); nevertheless, we have only to take a series of instances (hunger and thirst, sexual love, parental love, the acquisitive instinct), or to analyse the correlated psychological terms) will, emotion, pleasure-pain), to realise the adequacy of the theory; the finalistic character of the affective manifestations is especially significant.] **L. Burmester.** 'Bemerkungen zu der Mitteilung des Herrn A. Thierfelder "Eine Sinnestäuschung".' [Refers, for the windmill illusion, to the author's papers in *Zeits. f. Psych.*, xli. and 1.] **E. Meumann.** 'Über Bekanntheits- und Unbekanntheitsqualität.' [Experiments with nonsense-syllables, by the method of right associates, showed that the impression of unfamiliarity is far more definite than that of familiarity. It is characterised by a motor and ideational inhibition; a conscious blank; a peculiar feeling of unpleasantness; and a failure of reproduction. Familiarity comes to consciousness in various stages: as the easier flow of mental processes, with characteristic feelings and organic sensations; as ease of attention; as more or less definite reproductive activity. At times, the physiological facilitation seems to be effective of itself; since, however, our use of obscure criteria of familiarity improves with practice, it is not safe to say that, in such cases, no conscious mark is present. The judgment in direct recognition of this sort is not 'this is known' or 'familiar,' but rather 'this has occurred before'.] **F. M. Urban.** 'Eine Bemerkung über die Methode der ebenmerklichen Unterschiede.' [Wundt's cautionary rule, that a series is to be continued for a few steps after the turn of judgment, is useful for the detection of error, and does not affect the values obtained. It should therefore be followed when the method is employed in its traditional form.] **W. Wirth.** 'Zur erkenntnistheoretischen und mathematischen Begründung der Massmethoden für die Unterschiedsschwelle.—I.' [Critical discussion of Urban's treatment of the method of just noticeable differences, and of Lipps' evaluation of the equal cases.] Literaturbericht. Einzelbesprechungen. [Urban on Wirth, *Die mathematischen Grundlagen der sogenannten unmittelbaren Behandlung psychophysischer Resultate.*] Referate. Bd. xx., Heft 2. **F. Schubotz.** 'Beiträge zur Kenntnis des Sehraumes auf Grund der Erfahrung.' [Empirical observations of certain characters of visual space, suggested by Martius' work on apparent magnitude, and carried out with a modified form of Hillebrand's 'avenue' apparatus.

(1) The setting of avenues with steady fixation of a distant point is too difficult a task, even for practised observers, to yield comparable and psychologically valuable results. (2) Experiments on the setting of single straight lines (various heights and directions), and of two straight lines in the same plane, show a thorough-going correspondence of binocular and monocular vision : the line of regard is here allowed to roam at will. It follows that the observed curvature is not a matter of parallax, but an original property of our visual space. (3) There is a definite sphere, and there are definite conditions, within and under which double images do not appear. The stereoscopic range extends the farther into the third dimension, the broader and the farther off the basal (transverse-vertical) plane of fixation is taken. The range is increased both by the shift of an object sideward from the binocular centre of the fixated surface, and by increase of the number of visible objects. (4) The overestimation of the vertical sides of a square obtains in both binocular and monocular vision ; it too, therefore, is an original property of visual space. (5) If conditions are so arranged that a monocular field is set up, and binocular settings are then made within it, the monocular is considered by the observer as a binocular field, and the settings are therefore in objective accord with monocular vision. If binocular and monocular settings are made separately, in succession, the former always lie midway between the two latter. In this case, there is also a difference of plasticity ; the physiological difference of visual angle seems to condition a direct perception of depth.] **A. Schlesinger.** 'Die Methode der historisch-völkerpsychologischen Begriffsanalyse.' [A study of method, illustrated by the concept of the Ideal. Millioud, in his *La formation de l'idéal*, is wrong in deriving the individual-psychological from the social-psychological concept ; the former is basal, the later secondary ; and the two inquiries should be made independently. Haam, in his monograph on Moses, gives a good example of the way in which conceptual analysis should be approached from the historical and social-psychological standpoint : the real Moses is the prophet Moses, the man of truth, the man of extremes, the man of justice. The material of the new method is manifold : figures of myth and epos, the gods of religion, historical personages, works of art (especially architecture), religious and philosophical systems, systems of law and the constitutions of States. It would be best to begin, perhaps, with personal embodiments of the ideal, and to confine one's view to a single nationality. In this way, a series of monographs might be written ; their psychological evaluation would be in part independent, in part assisted by the results of the preceding systematic work in individual psychology.] **W. Betz.** 'Vorstellung und Einstellung. ii. Über Begriffe.' [A psychological analysis of concept, general idea, and definition, in the light of the writer's introspective experience : detailed analyses are given of concepts like 'howeverness,' of the general idea of colour, of the definition of a bridge. Concepts are ideated reactions (*vorgestellte Einstellungen*) ; general ideas are ideas of a special sort, produced by reactions, sharply distinguishable from memory images, and rather felt than seen ; the variability of the act of production renders them 'general' in the logical sense, though the generality has relatively narrow limits and the arousal of the ideas is rarely determined by any collective interest. Concepts are formed from a single case ; the collection of a number of instances under a concept is subsequent to concept-formation ; definition does not create concepts, but merely gives a correlation (*connotation* in the phrasing of J. S. Mill). While, then, concepts have psychological existence, as units of thought, they are worlds removed from the concepts of traditional theory, derived by abstraction from a large body of concrete presentations.] Literatur-

bericht. **R. H. Goldschmidt.** 'Beiträge zur Frage nach dem Ursprung und der Entwickelung der Kunst.—I.' Einzelbesprechung. [Rieffert on Witasek, *Zur Lehre von der Lokalisation im Sehraum.*] Referate.

"Scientia." Rivista di Scienza. Vol. ix., Anno v., 1911. Numero xvii. An excellent feature of this quarterly "International Review of Scientific Synthesis" is the French translations of Italian, German, and English articles. These translations are printed in a supplement at the end, and are very useful for those who only read French easily. **F Enriques.** 'I numeri e l'infinito. [A clear, but too psychological, explanation of the theory of finite and infinite cardinal and ordinal numbers, chiefly after G. Cantor, Peano, Padoa and Pieri. We are glad to see the axiom underlying the making of an infinity of arbitrary choices emphasised.] **P. Puiseux.** 'La place du soleil parmi les étoiles.' [Groups the facts of stellar evolution which allow us to class the sun, with the majority of the fixed stars, in one and the same natural family, and to assign with probability its most recent or nearest transformations.] **N. Herz.** 'Die Eiszeiten.' [Short exposition of the author's book *Die Eiszeiten und ihre Ursachen* on the influence of various causes on the periodic variations of terrestrial climates.] **G. Castelnuovo.** 'Il principio di relatività e i fenomeni ottici.' [Popular and lucid account of Einstein's principle of relativity.] **E. Rignano.** 'Dell' origine e natura mnemonica delle tendenze affettive.' [Notes on the nature and character of affective tendencies.] **W. J. Sollas.** 'The Evolution of Man.' [A geological address.] **E. Hahn.** 'Die Entstehung der Bodenwirtschaft.' [The rise of agricultural economy.] **Ch. Guignebert.** 'De Saint Augustin à Pie X' [After, just as before, the fall of the Roman Empire, the Christian religion underwent the great social law of continuous adaptation.] Biographical Note (on Stanislas Canizzaro). Critical Note. Critical Analyses. Reviews of Astronomy and Biology. Review of Reviews. Notices.

Rivista di Filosofia. Anno iii., Fasc. 3, May-June, 1911. **Roberto Ardigo.** 'Estema, Idea, Logismo.' [Premising that by 'Estema (Αἴσθημα) is meant a state of consciousness, the writer undertakes to show (i.) how from the experience of psychic conditions we are entitled to infer the existence of an object; and (ii.) how if consciousness is only of the present moment we can recall the past and anticipate the future. But the Italian Positivist's explanations seem to proceed on a series of assumptions which his opponents can hardly be expected to grant.] **Federigo Enriques.** 'La filosofia italiana al Congresso di Bologna.' [The list of brilliant contributions made by living Italian thinkers to the proceedings of last April's Congress is too long for transcription. A point of wider interest touched on in this article is the presence of Padre Gemelli and other representatives of neo-scholasticism at the Congress, which its President defends against the criticism of certain free thinkers.] **B. Varisco.** 'Dio e l'anima.' [Starting from Aristotle's Active Reason and Rosmini's intuition of Being, Prof. Varisco arrives by a series of arguments—or rather of very large assumptions—at the existence of a personal God.] **Paolo Rotta.** 'La rinascita dell' Hegel e la filosofia perenne.' [Hegel's claim of rationality for the real world is a striking confirmation of the scholastic philosophy, which says the same thing in slightly different language.] **Luigi Valli.** 'Le filosofie che non vissero.' [The writer of this ingenious and suggestive study argues that as the vitality of the successful philosophies has been due to the casual combination of several conditions among which truth need not necessarily be included, any number of philosophies may have perished in the struggle

for existence, possibly truer than those that have survived.] **Roberto Menasci.** 'Infinito e indefinito in Cartesio.' [Descartes maintains the infinity of God as a positive certainty. But he leaves the infinity of the world an open question that we have not the means of deciding.] **L. Michelangelo Billia.** 'Per l'io di Cartesio e di tutti.' [Not so much a discussion of the 'Cogito ergo sum' as a polemic against the limited views of personality that prevent men from identifying themselves with the universe and so partaking of its eternity.] Bibliografia, recensioni, etc. Anno iii., Fasc. 4, July-October, 1911. **Giovanni Marchesini.** 'La filosofia del "come se".' [The philosophy criticised in this paper is that of Hans Vaihinger, mostly composed in 1876-78, but only published in 1911 under the title of *Die Philosophie des Als ob*. According to the German thinker our epistemology is a scaffolding of fictitious assumptions constructed with a view to practical purposes. But according to the Italian positivist we should not know what was fictitious unless we could compare it with a known reality; nor could we credit our beliefs with a practical value unless they had a theoretical value as well.] **Antioco Zucca.** 'Le lotte dell' Individuo.' [The life of the individual forms no true connected totality, but is a mere succession of transient states without memory of or interest in each other's happiness. He may therefore be reasonably invited to forget his immediate sufferings in looking forward to the future felicity of the race.] **Guglielmo Salvadori.** 'Il significato filosofico dell' evoluzione.' [Evolution would be unintelligible without an immanent teleology involving a continuous ascent to ever higher forms of existence and some underlying spiritual reality of which our consciousness is one expression.] **Mario Vecchi.** 'La Logica secondo le vedute di F. Enriques.' ['Logic implies an invariable and unconditioned relation between the laws of thought and the phenomenal world'; and so, in a certain sense, which this article explains at large, may be said to possess objective reality.] **A. Pagano.** 'Positività, giuridicità, eticità.' [Positive law does not derive its binding force from the command of a superior but from an ethical necessity, holding in so far as obedience to it is a moral obligation. And the absoluteness of the moral law does not apply to the human beings among whom it comes into existence, but to the relations subsisting between them.] **Alfredo Poggi.** 'Socialismo e religione.' [Socialism has no use for Theism under the Christian or any other form; but Socialists have their own religion of enthusiasm and hope.] Bibliografia, recensioni, etc.

IX.—NOTES.

NOTE ON A REVIEW OF PROF. NATORP'S *DIE LOGISCHEN GRUNDLAGEN DER EXAKTEN WISSENSCHAFTEN.*

In No. 80 of this journal appeared a notice of the above work which, I think, is very misleading, although it is abundantly clear that the writer has tried to treat fairly, and even generously, this attempt on the part of a philosopher to deal with the somewhat alien subject of mathematics and mathematical physics.

I shall mention first one or two criticisms which are typical of the whole review.

When Prof. Natorp points out, on page 120 of his work, that Frege's definition, "the two things a and b become one in number when a and b are identical," presupposes the notion of two, the reviewer objects that Natorp has simply been misled by a verbal form, adding that this and other errors "arise from non-acquaintance with the symbolic or mathematical logic". But there is nothing in Natorp's position even to suggest that it rests upon the chance occurrence, say, of the word "two" or of a substantive in the plural form. The vicious circle complained of by Natorp is set out on page 98 and frequently elsewhere. Throughout the book runs this protest against the abstraction of number from objects presented to consciousness, even when these objects are emptied of their content to become mere positions in time and space (p. 110). It is this which underlies the author's objection to all the attempts which have hitherto been made to derive number from the relationship of "things" to classes (pp. 114-115).

When we are further told that Prof. Natorp, in discussing, on page 118, Frege's attempt to reduce the concept of unity to that of identity, "mistakenly points out that here is a circle, because *numerical* identity is meant," it is difficult to resist the impression that not Natorp, but the reviewer, has been misled by a verbal form. Again, if Prof. Natorp generously acknowledges Frege's services in combating formalism and "abstraction from the given," and yet is correct in proving that Frege, too, succumbed to this very charge, surely it is unsafe and a little unkind to cite this as sufficient to "rouse any one's suspicions that such an error is not committed in the works of the modern founders of mathematical logic".

Thirdly, the contention that cardinals do not depend on order is traced back to the same fallacy (104 ff., 109-110), yet the review goes on to say that "on page 157 Prof. Natorp is wrong in stating that the commutative law is not irrelevant with cardinal numbers".

But perhaps the most surprising thing in the critique is the passage where Natorp's conception of thought as motion is ascribed to one of two possible sources, *viz.*, a confusion between psychology and logic, or else a mistaken view of thought as essentially discrete and inadequate to the continuous nature of reality. Acquitted of the former of these sins, Prof. Natorp is classed with Bergson and Mr. H. G. Wells. This is a startling

announcement to any one who recalls Prof. Natorp's treatment of the Parmenides in his *Platos Ideenlehre*, and as a matter of fact it is contradictory to the whole doctrine propounded in the present work. It is indeed the failure to see this that has led the reviewer to claim that "the errors in such phrases as 'the number is infinite' (p. 160), or continuous, or many-dimensional, arise from non-acquaintance with the symbolic or mathematical logic".

This is to ignore the main purpose of the book, which contains, I believe, the first real attempt to rest mathematics on a logical basis broad enough to obviate the necessity of all "generalisations of number" so that negative and fractional numbers, the irrational, the transfinite and the imaginary are all, as it were, implicated from the beginning.

There is no hint of this attempt, to say nothing of any estimate of its success or failure, in the review in question. The writer confines himself largely to the historical and critical discussions which serve merely to illustrate the main theses of the work, and a reader of the review unacquainted with the original might be forgiven if he mistook these digressions for the substantive part of the book.

J. J. Maxwell.

NOTE ON THE ORIGIN OF THE ATOMIC THEORY.

In this journal (No. 79, pp. 394-398) Mr. A. W. Benn presents certain views on the origin of the atomic theory, with which I am happy to find myself in substantial agreement. It is not my purpose at this time to discuss other points of difference, but I should like to question one statement: "For the notion of fire or anything else as composed of particles, fine or coarse, first came in with the atomic theory" (p. 397). The falsity of this position has, I venture to think, been sufficiently shown in my study, *Antecedents of Greek Corpuscular Theories* (Harvard Studies in Classical Philology, vol. xxii. (1911), pp. 111-172), which was in the press when Mr. Benn's article appeared. Evidence of the same character, though more briefly stated, appeared in my article, "Qualitative Change in Pre-Socratic Philosophy" (*Archiv für Gesch. der Philosophie*, Bd. xix. (1906), pp. 333-379).

W. A. Heidel.

MIND ASSOCIATION.

The Annual General Meeting will be held in Trinity College, Cambridge, by permission of the Master and Fellows, on Saturday, 1st June. The following arrangements have been made:—

3·45-4·15 p.m.—Reception and Tea. (Trinity College Lecture Rooms, Staircase I., Great Court.)

4·15 p.m.—General Meeting of the Association; to be followed immediately by a meeting of the London Aristotelian Society, to which members of the Association are invited. Symposium on "Purpose and Mechanism". Papers (to be taken as read) by Messrs. W. R. Sorley, A. D. Lindsay, B. Bosanquet and G. F. Stout.

8 p.m.—Dinner in Trinity College. Tickets, price 6s., exclusive of wine, may be procured from Dr. McTaggart, Trinity College, on or before 29th May. Remittance should accompany application for tickets. Tickets may be procured by members for ladies or other guests. Evening dress optional.

Persons who desire copies of the papers of the Symposium should apply to Mr. H. W. Carr, More's Garden, Cheyne Walk, London, S.W., about ten days before the date of meeting.

The following have joined the Association since the printing of the last number :—

Bain (J. A.), 37 Widdrington Terrace, North Shields.
Field (G. C.), Courtlands, Westbourne Road, Edgbaston, Birmingham.
Lee (A.), Hartley College, Whalley Range, Manchester.
Marshall (Mrs. D. H.), Ovingdean Hall, Brighton.

To the Editor of "Mind".

Dear Sir,

With respect to the *Notes* by Miss Haldane and Dr. Ross, published in Mind, N.S., 81, in reply to my criticism of their *Philosophical Works of Descartes*, vol. i. (Mind, N.S., 80), I beg to apologise to Miss Haldane for my comment on her use of the phrase "in case" in the sense "for fear that". I only discovered after the publication of my review that the expression, though unfamiliar to an English reader, is employed by Sir Walter Scott and other distinguished Scottish authors, and thus has a sufficient justification. I would also admit that Miss Haldane seems to have shown that technically her ascription of the decrees of a Council to the presiding Pope has good precedent, though Descartes is careful to indicate that his reason for professing himself bound by the command to "refute the atheists" is that the order issued from the *Council* and not merely from the Pope. Of my other criticisms I have only to say that, after careful consideration, I abide by every word of them.

Yours faithfully,

A. E. TAYLOR.

MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY

I.—ON RELATIONS; AND IN PARTICULAR THE COGNITIVE RELATION.

By S. Alexander.

1. *The Nature of Relations.*—Some relations seem to belong to things themselves, like the relation of paternity; others might appear to be the work of the mind in comparing or contrasting, such as likeness and unlikeness, the negative relation, etc.; with some, such as relations of time and space, the case seems doubtful. When A is said to be far from B or to be greater than B, in what sense does the relation belong to A or B? A let us say weighs a pound, and B an ounce. The pound weight belongs to A, but is not its being greater than B merely introduced by the mind which measures the two weights against one another?

This question, an epistemological one, is suggested by the diversity of experienced relations. A difficulty of a different sort is raised when we inquire into the reality of relations. On the one hand, when we keep to concrete facts, some relations seem more real or more important than their terms. For instance, the relation of sovereignty is or may be far more important than the individual who is sovereign. On the other hand relation seems to many so much infected with contradiction as to be essentially appearance, when they inquire into its metaphysical value. The argument assumes many forms, but ultimately it is of the following sort. Things which are related to each other are said to be correlatives; yet we may say that relations in turn are correlative to their terms. Consequently there is a new relation between a term and its relation, and relations seem therefore to involve the infinite regress. Let us assume that infinite regress, under

all conditions, implies absurdity. The assumption is not valid; for there is a great difference between the absurdity of the infinite process whereby the kitten chases its own tail, and the infinite divisibility of a line. But assume that infinite process condemns. Then, since, to revert to the first half of the dilemma, relations are at least as real as the terms they relate, either we must deny both to be real or we must ask, is the argument sound according to which relations involve the infinite process?

Relation is in fact the vaguest word in philosophy. It stands for any connexion between things. But while specific relations are defined, relation as such, what relation is, appears most often to be taken for granted without any attempt at determination. I do not doubt that relation is a notion so simple as to defy definition. Unless you know what a relation is, no one can explain it to you. But the same thing is true of red colour. Yet we can fix our minds upon what red colour is by describing it as the colour of blood. Any similar attempt to describe relations will but call attention to something equally obvious. But unless it is done we are likely, in speaking of relations, to be vague and to move about in the dark. At least I have found it so in my own case.

In this matter I have found the greatest help from the statement of James in his *Psychology*[1] that relations of space were themselves spaces. In one of the chapters of his *Meaning of Truth*[2] James describes how he was much troubled by T. H. Green's criticisms of English sensationalism and by Green's doctrine that relations are pure acts of intellect unifying our experience; and how "he well remembered the sudden relief it gave him to perceive one day that space-relations at any rate were homogeneous with the terms between which they mediated. The terms were spaces and the relations were other intervening spaces." Possibly others like myself who acknowledge with gratitude their indebtedness to Green felt the same sort of relief when they first read James's *Psychology*. In the chapter referred to James recalls a distinction drawn by Prof. Strong between 'saltatory' and 'ambulatory' relations. "For example difference is saltatory, jumping as it were immediately from one term to another, but distance in time or space is made out of intervening parts of experience through which we ambulate in succession." And James goes on to describe his own view of knowing as ambulatory. With this view of knowing I am not here concerned. Moreover the

[1] Vol. ii., pp. 148-153.
[2] Chap. vi., "A Word more about Truth," pp. 138 ff.

distinction of saltatory and ambulatory relations, useful and happy as it is, appears to me of secondary importance. What is really significant and important in ambulatory relations is that the relation is, whether homogeneous with its terms or not, of one texture with it, constitutes with them one integral situation. The thesis which is maintained here is that what James says of space and time and other ambulatory relations is true of all relations. They are none of them capable of abstraction from their terms, if they are represented truly. There never is a jump from term to term: the terms are parts of one continuous tissue. Whether there are many distinguishable links or few, or whether the interval is like its terms or not is a secondary matter, however striking in its effect. Difference is ultimately no more of a jump than the relation of two adjacent points of space, if we can with propriety speak of adjacence in the members of a continuous series.[1]

A relation then may be described as the whole situation into which the terms which stand in the relation enter; so far, of course, as the situation concerns the relation. The situation may be one of events, as in the causal relation, or of things which are simultaneous, as the points of a line. By, the situation, is meant the real system of circumstances, which used to be called the *fundamentum relationis*, in so far as that system of circumstances brings the terms into continuous connexion with one another. This applies directly to the relation between the two ends of a line, or the interval of time which forms the relation between two points of time. The interval is the whole system of circumstances into which the two points of time enter in so far as that system connects the points. The relation of maternity is the actual history of bearing the child and the whole set of actions, including feelings, in which the mother as mother is engaged towards her child; again with the proviso, in so far as these actions establish a connexion between mother and child.[2] The reason of the proviso is that these actions by themselves are, as such, states of the mother; they

[1] Since I corrected this paper for the press, I discover that I have neglected to read James's paper on *The Thing and its Relations* printed as Appendix A of *A Pluralistic Universe*. What is said above and in the remainder of the section as to the continuity of the terms and their relation does not add anything to what is said by James in that paper. There is at most a difference of emphasis.

[2] Compare Mill's admirable description of relations, *Logic*, Bk. i., ch. ii., § 7, and particularly ch. iii., § 10, where however allowance has always to be made for Mill's prepossessions (1) in favour of idealism in metaphysics and (2) in favour of atomism in describing mental states.

are indeed essential to the relation, but the relation involves the child as well as the mother, and is the total situation or connectedness, established by actions or passions on the part of the mother and of the child. The relation of kingship is the system of acts and the capacities of them, or passions and the capacities of them in which the king as king is concerned with his subjects, in so far as these set up a situation of king and subjects. It is a matter of subsidiary moment whether the relations are as in these examples asymmetrical, or as in the relation of equality, symmetrical. In so far as the situation of mother and child is a total situation, the two relations of mother to child and child to mother are the same situation seen from two different ends. What is action in the one case is passion in the other. Moreover if the relation is a very comprehensive one, it may not be easy, without straining of language, to describe the situation except in terms of the one side of it. Thus the filial relation comes to include active support of the mother by the child; and it may seem unnatural to describe this situation as part of the maternal relation, because we more naturally describe the relation from the point of view of actions than passions. But this is a mere matter of usage and presents no difficulty. These examples also illustrate the obvious limitation which was added above to the general description of relations, that they are the whole situation into which the terms enter, so far as the situation concerns the relation. For instance the situation of the king towards his subjects may be spatial as well as kingly: like Saul he may be a taller man than his subjects. This does not concern the kingly situation. Finally we may observe that what James (in the *Psychology*) affirms of relations of space and time is true of other relations, indeed of all other relations, that the relation may be just as substantive as its terms. It is just as much a reality as the terms and belongs to the same tissue with them; and it may thus be on occasion the centre of regard while the terms become as it were adjectives of it. The two points may be merely the ends of the line; in a constitutional monarchy the king may be an appendage or function of the constitution; the characters in a play which are related by the plot may be shadowy servants of the plot, the "fringe" may be central and the centre a "fringe".

It is not pretended that the above is anything more than a description of relations by pointing out what it is that we mean when we talk of relations. If it is obvious, its importance lies in the consequences. But so far there is no excuse for regarding relations as the work of the mind. They are

one element in empirical fact. But some account must be taken of that doubtful class of relations, such as relations of likeness or difference, identity, equality, greater or less, and the like, or even such relations as 'and,' 'but' or 'however'; all of which seem at first sight eminently to be mental. So subjective do such relations seem that attempts have been made to refer these relations to the experience of the act of attention itself by which two like or different things (to take these examples) are compared. The difference or likeness of things does not, it might be urged, belong to the things, but arises from our experience of them. Red and green are red and green; but it is we who feel them 'different'. And we might even say that one magnitude is declared greater than another because of the felt excess in the act of attention to the one over that of attention to the other. But fascinating as such a theory might seem, it is clearly circular. For the acts of attention must themselves be compared to feel their likeness or difference. The only difference between likeness in things and likeness in mental acts is that in the one case it is contemplated and in the other enjoyed.[1] This is a categorial relation. And doubtless if our principle is right the understanding of mental likeness will enable us better to understand likeness in things. But it is only the categorial character of such relations which misleads us into attributing to them a subjective origin. Even 'but' and 'still' are not subjective; they are found also in objective situations of opposition.

What then we may ask are the objective situations which constitute such relations as likeness, identity and difference? The answer could only be given by a full inquiry into universals and particulars, which I cannot here attempt. I am content to regard the relation of particular and universal as a total situation into which those terms enter, say the participation of the particular, in Platonic fashion, in the universal. Difference means a real exclusion of the differents, whatever that exclusion may be, whether from the same time and place, or from participation in the same universal. Considering the difficulty of describing the situations in question we might conveniently fall back upon a pragmatist criterion, describing by a symptom rather than by a cause. We might say that the real situation into which two things which are identical in some respect enter is such that in virtue of it one may be substituted for the other.[2] When we have complete substi-

[1] Compare article on 'Method of Metaphysics' in MIND, No. 81, Jan., 1912.

[2] Cp. James. *Some Problems of Philosophy*, p. 103.

tutability, then we have numerical identity. Likeness carries with it partially successful and partially unsuccessful capacity for substitution. There will be corresponding criteria for difference, whether numerical or only conceptual (to borrow a term of Mr. Moore's).[1] It would in my view be a mistake to identify these relations with these consequences of them, as appears to be done by pragmatism. But these tests are at any rate useful as well as legitimate as a method of describing the real situations which constitute the relations.

2. *Are Relations Internal or External?*—From this the answers to certain well-known questions follow at once. Are relations internal or external to their terms? In the strict sense, indeed, neither alternative is true. For if a relation, to be internal to the things it relates, must be a quality of them, it is clear that it is not a quality of each term separately. For that would omit from the relation the independent correlative thing. This has been already alluded to. The child is in no sense a quality or part of a quality of the mother, but the independent real existence of the child is necessary for the circumstances which make up the whole situation described as the relation of maternity. On the other hand to call the relation a quality of the two terms taken together is an abuse of thought. The relation is nothing but the connectedness of the terms, and it is not a quality. But if we mean by the internality of a relation that it cannot exist independently of its terms, then in this sense relations are internal to their *terms*. It seems obvious that they are not external to their terms, if we remember that the whole situation into which things enter when they are related is not an aggregate of circumstances but continuous, literally an integral situation. In so far as things enter into the relation and become its terms, it is not external to them. The relation exhibits itself in the acts or states by virtue of which the things participate in the relation. Thus paternity is not external to a father but it is external to a man before he is a father. Thus a relation can only be considered external to its terms if those terms are considered out of the relation, or rather if they *can* as in the case of paternity be so considered. But in that case there is no relation of the kind contemplated. Hence if we separate the world into terms *and* their relations, we are making an abstraction. The world consists of things *in* their relations. The notion of the externality of relations to their terms implies discontinuity between things. If they were so

[1] In his paper on "Identity," *Proceedings of the Aristotelian Society*, vol. i., 1900-1.

discontinuous, there would be no total situations in the world, and consequently neither relations nor terms. For while you can explain wherein consists the continuity of elements which are taken to be relatively independent members of a continuum, you cannot explain how a continuum can be generated from elements supposed to be discontinuous and completely independent.

It is only when relations are regarded as external to things that the famous argument from the infinite regress holds good. As I understand Mr. Bradley's treatment of relations and qualities, his demonstration that qualities and their relations are not reality but appearance, and that whether taken alone or together they are ultimately unintelligible, depends on abstracting or separating things from their relations, so that *in effect* the relations are external to their terms.[1] Unfortunately, we are left to conclude that relations as they really enter into experience are appearance; but such relations, not external to their terms, involve continuity, and in this case the argument from infinite regress breaks down. For in that case either we get the sort of infinite regress which is legitimate; or we fail to get the infinite regress which is invalid and circular and convicts of absurdity. If relations are considered as the total situation which makes its terms continuous with one another, we can find here as in every continuum an infinite regress, for of every continuum it is at least true that a term exists between any two terms. On the other hand, if we still understand the relation as a con-

[1] The chief business of this paper is with the cognitive relation, in its connexion with relation in general; and I have to be brief in respect of the general question; and I hope that in my brevity I shall not be understood as misrepresenting Mr. Bradley. I do not mean that he thinks relations are external to their terms. On the contrary it is perfectly clear that he does not; and in Note B of the Appendix to his later editions *A. and R.* this is insisted on with all detail. "The whole," he says, p. 575, "has a character which cannot be said to consist barely in mere terms and mere relations between them." "The whole that is analysed into relations and terms can fall into the background and be obscured, but it can never be dissipated," p. 573. I only mean that his arguments in chapter iii. apply to relations only as separated from the terms, with neglect of the "whole" (what I am calling the total situation). It is this neglect which Mr. Stout seeks to make good by introducing the idea of 'relatedness'. I must refer forward to the later part of this section and to what is said in the next section. Of course too the argument from the infinite regress is not put by him in the crude form which I have given to it. According to him, if you speak of qualities and relations, a quality A is A_1 in itself and A_2 in its relation, and consequently there is a fresh relation between A_1 and A_2. But it does not seem to me that this is different in principle from my crude version. If the quality in the relation were different from the quality in itself, then the relation is external to the quality.

tinuous situation, the invalid infinite regress does not exist. Take the argument, to show that such invalid regress exists, in the deliberately bald form in which I have above represented its essential character. The relation is itself correlative to its terms, and there is therefore a new relation between the term and its relation to the other term; and so on. It is clear that this makes the relation independent of its term and discontinuous with it. For it is the relation itself which makes the terms correlative and terms of the relation. But if there is a new relation of the relation to its term, the relation has now become a term, while pretending still to be a relation, and this is to strip it of its real character as a relation, that is, as a situation connecting its terms, and in fact makes it a term of itself. For example, suppose A is the father of B. If we assert a new relation between A and A's paternity of B, we imply that the relation in question is separable from A as A enters into the relation of paternity to B. There may of course be a relation between A's paternity of B and A, so far as A stands outside the relation; that is to say, A's other qualities may be related to his paternity of B, but this is irrelevant, for the A who is supposed to be related to A's paternity of B is the A who is the father of B.

A further question is raised by Mr. Stout's proposal[1] to distinguish, besides terms and their relations, a third element, namely the relatedness of the terms. By relatedness he means the actual element of continuous connexion which as we have seen all relation as it really exists implies. With this distinction he is able to show convincingly that the contradictions alleged by Mr. Bradley in the conception of things or qualities and their relations disappear. That is to say, if we consider real experience and consider the real relations of things as containing besides mere "relation" also relatedness, he is able to show that relations depend on qualities and qualities depend on relations, in different respects; relations depend on qualities for the character which they have, or for their very existence, but qualities depend on relations only for being related. But I think he is driving out Satan by Beelzebub. For relatedness has to be introduced in order to make good the defect of the 'relations' which in the arguments he is considering are abstracted from their terms. The real answer would seem to be that the relation so described is not a real relation. The real relation includes relatedness, which is actual entry into a relation. Now if a

[1] 'Alleged Self-contradictions in the Concept of Relation,' *Proc. Arist. Society*, vol. ii., 1901-2, a paper to which I am greatly indebted.

relation means the whole relevant situation into which the terms enter, there can be no entry into the relation distinct from the relation itself. The relation once more is taken generally or in the abstract and relatedness or actual entry is required to make it particular.[1]

It does not however follow that because there are no abstract relations there are no general ones. There seems to be no more reason for denying relations like paternity or kingship to be general than for denying situations to be general. But just as we are apt, because we can legitimately distinguish in things the law of their constitution from the particularities which obey the law, to think of the concept or law as something altogether separate from its particulars; so by taking relations in their generality, we are apt to set up the relation as an independent existence, as if it did not always assume in our experience the form of some situation involving particulars and therefore itself coloured thereby; and then arise the antinomies we have mentioned as to things and their relations, in which things are conceived as if they were doing nothing to each other, were unrelated, and relations as if they had nothing to relate.

3. *Categorial and Empirical Relations.*—So much for the question whether relations are in their nature internal or external. But within relations a distinction has now to be drawn, which is independent of the previous problem. Some relations, such as equal or like or different are *intrinsic* to their terms, others like paternity or kingship are *extrinsic* to them. Anything in space must as such stand in spatial relations; anything which has magnitude must be equal to or greater than some other magnitude. But a man though, to be a man, he must stand in human relations to other human beings, must for instance have a father, need not be a king or a father or a servant. It is clear from the examples that the distinction is relative. A man need not be the actual father of any one but he must be the son of some one, and the filial relation is therefore intrinsic to the type man. Thus we may distinguish properly three kinds of relations: those which are intrinsic as belonging to things necessarily, that is to anything; those which are intrinsic to a type, but not necessary to the existence of everything, and

[1] This is the ground of Prof. A. E. Taylor's criticism (in *Elements of Metaphysics*, p. 155). He urges that if my hat is not actually on my head, that is if the relatedness of the terms is not there, the relation of 'on' does not exist but only some other, more general relation, such as 'above'.

those which are extrinsic simply. The first kind of relations are categorial: they arise out of the categorial characters of things. Everything is in time or space, has quantity, has degrees of quality, has causality so far as it is in time at all and so universally, that is it stands in causal relation with something or other. On the other hand both the other kinds of relation are empirical, in the narrower sense of that term. True that a man as such has human relations, which, like relations to his kind, are intrinsic to him but they flow from his empirical characters and not from his categorial ones. The strictly extrinsic relations are still more obviously empirical. The difference of the last two classes is in fact the old difference between essential properties and accidents. A man's feeling for his kind is essential; but to have a son or a wife is an accident and may be a separable accident. The distinction of categorial and empirical relations might be expressed more accurately as that of *a priori* and *a posteriori* relations, but there is little risk of misconception of the meaning of the term empirical, as if what is described as not-empirical was not experienced.

This distinction of categorial and empirical relations has real importance for metaphysics. It affects the answer to the question whether there can be any truth or reality short of the absolute or whole reality. The categorial characters of things and the relations in which those characters exhibit themselves are the fundamental or pervasive features of experience. Consequently any attempt to deny their reality and reduce them to the level of mere real appearance must consist, like Mr. Bradley's, in showing them to be inherently or internally contradictory. The success or insuccess of such attempts does not fall to be considered here. But it is not enough to show that these notions present difficulty. And what is more to the point it is not enough to show that they are partial and incomplete. For this consideration is only relevant to prove their ultimate unreality if it can also be shown that they are vitiated or at least altered by the addition of fresh characters. Now truths of space and time are not vitiated because things possess other than merely temporal and spatial characters. I take space and time merely as instances of categories in general. If they are the fundamental features of experience, any fresh increment of experience implies them already and cannot alter them in themselves. It is not merely that in these categorial truths we abstract from the other characters of things, a justification which is sometimes put forward for belief in such truths. A circle is a circle whether it is of bronze or chalk. It is only

abstract as the object of thought is abstract in distinction from the object of perception.[1] It is not hypothetical in itself, but necessary, in the sense of fundamental.

But when we come to empirical relations, seeing that they are *a posteriori* or empirical, the question whether a partial truth is wholly or only partially true is a very different matter and it can only be settled by empirical experience. The answer depends on whether the fresh relations into which a thing enters alter its character or not. A man may have his character as a man changed by becoming a king or a father. He may be brutalised by the possession of power or become egotistic or parochialised by the concentration of his affections. Consequently it is only so far as we can be sure that the intrinsic character is not affected by fresh empirical relations that we are justified in laying down universal propositions. Empirical propositions are thus true with a proviso which limits the conditions to a certain circle of characters. This is what gives its value to the thesis that science is only so far true as it emulates the mathematical sciences. At the same time it remains that a partial truth is not untrue because it is partial but because the addition of fresh relations may empirically alter the old ones.[2]

4. *The Relation of Knowing.*—The most interesting of all relations, for the discussion of which the preceding paragraphs have been written, is that between the subject and the object of cognition, the relation of knowing, or, more strictly, of contemplation, for it is clear that enjoyment is not a relation at all, but a state of the self.[3] This relation of knowing an object occurs when a thing called the subject, which possesses the property of consciousness, being stirred by some means or other (of which more hereafter) into con-

[1] Bosanquet's *Logic*, vol. i., p. 249. Second edition, p. 234; and in many other passages.

[2] One conclusion from the above may be drawn. Consciousness itself, we may observe, is empirical. It is in no sense the foundation of the categories; it only has categorial characters like other empirical objects. Hence a statement about consciousness may be vitiated by the addition of other empirical elements as much as a statement about an empirical external thing. Thus I may fancy I am acting from a sense of duty in exposing another man's action. But I may really be doing it from malice. Thus my consciousness may be illusory as well as the objects I apprehend. I was in fact enjoying the malice as well as the duty, but I disregarded it.

For the above section I have derived much help from Mr. Stout's essay on "Error" in *Personal Idealism*.

[3] I do not mean that you do not know yourself, but only that to know yourself is not a relation of yourself to yourself. On the question of knowing mental states I have written elsewhere (*Arist. Proceedings*, vol. ix., 1908-9, pp. 25 ff.) and propose to return to the subject.

sciousness of a certain 'direction' finds itself in the presence of an object, not itself, appropriate to that condition of consciousness. In the case of sensation or perception, the act of consciousness is evoked by the object itself; in other cases, those of images, memories, thoughts, the act is not evoked by the object itself through affection of the sense organs, but indirectly. Let us abstract from the manner in which the consciousness is evoked, and we have in all cases of cognition of an object the compresence of two things, the subject in a condition of apprehension, and the object revealed to the extent to which it is apprehended. The relation is thus the whole situation constituted by the togetherness of these two things, so far as it connects them. The percipient enters into the situation as the act of, say, perception; the object, as perceived, that is in the form in which it is perceived. The relation is that of this togetherness. We cannot say, as might be suggested, that the relation is the perceiving. For this is to take the perceiving as containing also the perceived. Whereas the perceiving is but the act of the subject, and the perceived is not an element in the perceiving, but distinct from it and *related* to it in the single situation which is described as their togetherness. Just as the distance of two points is the space into which the points enter and of which they are the limits, so the relation of subject and object is the connectedness of two terms which are respectively the subject as perceiving and the object as perceived.

The difficulty of describing the precise nature of this relation of togetherness is its extremely elementary character and simplicity. No proposition is more frequently heard in philosophy than the statement that the relation of subject and object in knowing is unique and incomparable with other relations. In truth, the uniqueness attributed to it does not belong to the relation itself, but to the character of consciousness which belongs to one of its terms. I feel the wind blowing against my cheek. I am together with the wind, but since the wind evokes in me a consciousness (of a certain sort, or 'direction') I apprehend or know the wind. Substitute for the conscious term of the relation a term such as a plant, which I suppose not to be conscious but only alive, and the togetherness of the living thing and the air is a vital action of respiration. It is no longer cognition, for the one term of the relation has not consciousness. Or substitute for the plant an india-rubber ball which yields to pressure of the hand and then by its elasticity regains its normal form, here again is the relation of togetherness; but there is no cog-

nition, nor even life, but only elasticity of a material thing. Now in each case the peculiar colouring of the relation, its specific character, that which makes it unique, is derived from the nature or the degree of development of the term which enters into the relation. So far as consciousness is a unique property of certain things, the relation of knowing an object is unique. But life or colour or elasticity are in this sense equally unique, that is, they are the characteristic, specific properties of certain types of existence. But it is of course not in this sense that it is maintained that knowing is a unique relation. For that statement implies that knowing is incomparable with any other kind of relation, whereas it has now been shown to be only one form which the general relation of togetherness assumes, when the one term which enters into it happens to be of the conscious type.

It is in fact clear that the relation of togetherness between knowing subject and known object, so far from being unique, is the most general and most elementary of all relations. Abstract from the special togetherness of conscious subject and object; and we have this relation wherever in the world there is connectedness, and this is the elementary condition of there being one world. It is the fundamental relation of which all relations are the developments under more complicated conditions. This needs some further explanation. I do not mean that other relations, such as likeness, succession, causality, are specific forms of togetherness, in the mere sense in which life is a special form of togetherness, or knowing is, according to the phrase just used. For in these last cases the general relation is the same, and the special character is introduced into it by the particular empirical or *a posteriori* character of the terms. I mean that these other relations are specific types or species of togetherness in the sense that they are not mere togetherness, but togetherness under the forms of the categorial or *a priori* elements of things. Thus space and time and causality and quantity are categories of things. Spatial relations are togetherness in space; they are not bare connectedness, but connectedness in the concrete form of distances. Succession is one kind of connectedness in time. We have causality when we have a determinate event, that is an event so together with another in time and space as to be directly or indirectly continuous with it. We have the so-called relation of substance and attributes or accidents when the togetherness assumes the form of connectedness within one portion of space and continuity within a duration of time. But the category of substance raises special questions of its own with which I do not attempt to deal.

Thus the relation of togetherness which, when it subsists between an empirical thing with the empirical character of being conscious and any object contemplated, is called knowing, occurs wherever there are finite individuals in the world, relatively independent or separate, but belonging to one world. The relation is, therefore, the most universal type of relation, or is relation as such. Instead of declaring it unique, it would be truer to say that between any two individuals whatever there subsists a relation such that the one may be said to "know" the other. In this wider employment of "knowing," not only does mind know things, but life "knows" material things and one material thing "knows" another. The table knows the ink-pot which presses on it, the tuning-fork knows the tuning-fork to which it responds. Everything A knows everything else B and enjoys itself. It depends on the special nature of A, whether it is a mind or a living being or a stone or a vibration, how much of B it knows, that is how much and in what shape B is revealed to it. A only knows an aspect L of B if A first of all can be stirred to an activity appropriate to the revelation of L, and, secondly, if it actually is so stirred, by whatever means. But all togetherness (and every A is together with every B) evokes in A and B the possible and appropriate response on either side. Thus, for example, I hear the tuning-fork sounding C, but another tuning-fork which sounds along with it does not apprehend the sound as sound, but let us say it only knows a vibration of a certain rate. Hence, too, may be explained what may at first blush be a puzzle to many. Since I am together with everything in the world, why do I not apprehend these things? I apprehend in fact only a small portion, namely, those with which I am so together that I am in an appropriate act of consciousness. The rest I do not know in the way of conscious knowledge. But my body apprehends some of them in so far as it lives, and others in so far as it is merely material. Thus I am not conscious of the pressure of the air, but my body knows it, though not necessarily as pressure, and my life knows it in breathing it. When my back is turned upon the wall, I do not see the wall, and in general am not aware of it, but my material body does apprehend it.

To say that the relation of knowing is not unique, but is found as between any two finite things whatever within one world is by no means to assert that everything is a mind. The risk of this confusion makes it undesirable to put forward the proposition without the strictest reservation to this effect. There is no knowing in the proper sense unless A is

mind. Even though there is a steady progression from the lowest forms of existence to the highest, we are not justified in so emptying the word mind of its distinctive property of consciousness as to apply it where consciousness is not known to exist. As well declare all minds to be higher forms of matter. In this quandary, perhaps it would be most convenient to say that the fundamental relation of togetherness is that of subject and object and that this is knowing when the subject is a mind. Two things anyhow are to be firmly held: one, that the generic character of knowing is the most elementary of all relations; the other that it is a relation of knowing in the proper sense only when one member of the relation is a mind. Perhaps the assertion of the uniqueness of the knowing relation arises from a dim consciousness that it is in a sense a definition of relation as such. If so, to call a relation unique which is everywhere where there is any relation at all is a strange perversity. But it is almost certainly declared unique because the relation itself is confused with the empirical character of the one term which enters into it; and it was to expose this error that the above long exposition has been necessary.

5. *Experience of Togetherness in Knowing.*—All knowing being thus togetherness of the mind and its object, the question may be asked how is this relation experienced? The fundamental fact of experience is, I have repeatedly said, the fact that I and the object are compresent; and this is declared to be the deliverance of experience itself,[1] an empirical proposition, or rather let us say an experimental proposition. I have also sometimes said every experience gives us in experience two things, myself and the object and the relation between them, or in relation to one another, and it has been pointed out to me that something obscure and ambiguous remained in this statement, and I have myself been beset by the feeling that this is so. This obscurity I desire now to clear up. When I say that in perception, there are myself the subject, the object, and the relation between them, I do not mean that there is a relation of *and* or *together* over and above the terms myself enjoying and the object contemplated. To mean this would be to abstract the relation from its terms, and contemplate it by itself. But the relation is the total situation which constitutes experience. The terms of the relation are the thing enjoyed or myself, and the thing contemplated or the object. The contemplated object is the

[1] I do *not* mean that it is the deliverance of introspection. What is got by introspection in the experience is the I, which is enjoyed. The object contemplated is got by extrospection. And this account is true whether the object be a perceived object or an image or a thought.

object revealing or showing itself, the enjoyed thing is the mind apprehending, and the total situation is what may be called either the experiencing *of* the object, or the object's being experienced, according as the situation is viewed from the side of either term of it. The terms as they are thus described are the subject and object as they enter into the relation. There is therefore no "and" or "together" over and above the terms so described. We may indeed suppose the subject and object existing outside this relation and entering into it by the addition of and or together. I may of course happen not to be seeing an object and so not be together with it in so far as coloured. In this sense of special togetherness I may if I choose say that it is added to the terms so far as they are considered outside this special togetherness. But then of course the terms to which the special togetherness is added are not the terms of the special relation considered.

Consequently when I perceive a table, the table and my perception are together, and the fundamental fact of experience is these two things in the relation of together. Now how is the togetherness *experienced?* It is experienced in my enjoyment of the perceiving. In perceiving I enjoy my own act as together with the object contemplated, the table. May we not then also say that I contemplate the table as together with my enjoyment? The answer is negative. What I contemplate is the table, and in enjoying the contemplation of it I enjoy myself together with it. To contemplate the table and also its togetherness with myself would involve two errors. It would mean that I can contemplate myself, which I never can do, and which only an angel could do. And, secondly, it would mean experiencing the relation twice over. I can only contemplate the togetherness of the table with me in the sense that in contemplating the table I am together, and enjoy my togetherness, with it. For I cannot exclude my own enjoyment, and so far as that enjoyment exists the togetherness also exists. Supposing *per impossibile* that I could contemplate the table as together with myself I should be experiencing the relation from the side of both its terms at once, and counting it as I have said twice over.

In order to verify this, let us apply our general principle that a relation is the same whether the terms between which it subsists are two external objects or two states of myself, or myself and an external object;[1] and consider the relation

[1] This may be regarded as a way of stating the method of metaphysics described in MIND, No. 81, Jan., 1912.

of togetherness which I contemplate between two contemplated objects, the table and the chair. The relation is that either the table is together with the chair or that the chair is together with the table. In apprehending the table as together with the chair I thereby also apprehend the chair as together with the table. If I say both, I am counting the experience twice over. The reason why this escapes us is because the relation of together is what is called a symmetrical one. If A is together with B, B is together with A. But if A is the father of B, it is clear enough that nothing is added to the account of the relation by saying that B is the son of A. The relation may be described in either way, but not in both ways at the same time. Similarly with the relation of cause and effect. Now in the relation A is together with B, substitute for the contemplated A the enjoyed A, then since I must enjoy the togetherness I cannot also contemplate it, except in the sense indicated above. I am together with B or B is together with me or we are both together. But while an onlooking superior being would contemplate the facts indifferently in any one of these ways, and consequently I am together with the table in precisely the same way as the table is together with the chair (and my experience itself assures me of this, assures me that is that my enjoyment and the table are together as compresent things), yet when I ask how is the relation experienced I must answer that it is enjoyed and is exhausted in the enjoyment.

6. *Experience of the Knowing Relation.*—Having endeavoured to make this clear, I may now go on to ask is the mere togetherness thus experienced the whole of what is experienced in the knowing relation? Do I not also experience myself in a temporal and in a spatial relation to the object? In asking this question, we must ask it generally, in reference to all the various ways of knowing and not merely to the particular case of sensory cognition which calls for special consideration. Do I experience the remembered table or event as not only together with me but in spatial or time relation to me? It is plain that images (and in a certain sense thoughts[1]) are themselves extended in space and have

[1] There is perhaps something paradoxical here. But I am content to assume that even where thoughts are not spatial or temporal in their contents, like the thought circle or year, yet the thought is always embodied in some particular. The particular need not be an instance of the thought, but may be something quite different in kind. But my thoughts anyhow seem to need some *point d'appui:* they do not in Mr. Bradley's phrase 'float'. Even in the investigations of Messrs. Watt and his *confrères* the *Aufgabe* is not without attachment to something par-

succession and duration, that is I can contemplate in them relations of time and space. It is clear also that by reflective experience I come to learn that these images or thoughts (I do not mean the imagination or thinking of them) are related in time and space to my body, and so to bodily states which are also (or if you will are attended by) the consciousness of these images or thoughts. It is true also, as I believe, that I enjoy myself in time and space, that is in the identical place and time of certain bodily processes. But when I ask myself does any knowing on my part give me the enjoyment not only of togetherness with the object but of time and space relation to it, the answer is much more difficult. But it must be given, I believe, on the strength of observation, in the affirmative. I do enjoy time relation to the object, in the sense that I apprehend the object as belonging vaguely to one time (not to the same moment of time) with myself. The same precaution must be used to guard this statement as was used before with togetherness. I am not aware of the time relation in the sense that besides contemplating the object I contemplate the stretch of time between myself and the object. To do so would be to contemplate both myself and the object as if they were two events in time outside me; it would be to contemplate not merely the object but its date in time in reference to my experiencing it. I enjoy the time relation to it in so far as the object occurring in time evokes in me, by one way or another, the consciousness which is called apprehending it, and that consciousness has the time character. The same account applies to the case of space. I am aware of the object as somewhere in one space with myself, not necessarily in the same place. And again I do not contemplate the stretch of space between it and myself, which would mean being aware not merely of the object but of its distance from me. But in enjoying myself as in one space with the object I contemplate, I am in spatial relation to it in the only way possible where one term of the relation is enjoyed and not also contemplated.[1]

ticular, were it only the circumstances of the experiment. Grant that thoughts subsist while images and percepts exist, yet I cannot think that this means independent subsistence of thoughts; it is rather a means and a very valuable one of distinguishing two quite different but not independent elements in reality. However if any difficulty is felt, the text may be confined to images, though I should not myself know what to say in that case of the relation of self to its thoughts.

[1] Let any one, who at all possesses sensory imagination, test this by thinking of the lines—

> The same that oft times hath
> Charmed magic casements, opening on the foam
> Of perilous seas, in fairy lands forlorn;

This answer raises however a problem, not as to the fact, but of consistency and of its ultimate metaphysical bearing, which is mentioned in a note.[1]

7. *Sensory Experience.*—This appears to me the report of observation, of the experience of the knowing relation in any of its forms. But even if it be denied to *be* true in general, yet when we ask what is the character of the relation as experienced in sensory cognition, sensation or perception, we have to say that not only is this experienced, but something more. For reflective theory there is a real difference between sensory experience and images or thoughts. A perception is provoked in us by the action of the object perceived upon the

and asking himself whether he is not conscious of the object described as somewhere in space along with himself, that is does not enjoy himself as somewhere in space along with the object. Or let him try the same experiment on

> The antechapel where the statue stood
> Of Newton with his prism and silent face,
> The marble index of a mind for ever
> Voyaging through strange seas of thought alone ;

when he will enjoy himself in space along with not only the statue of Newton but the strange seas of thought imagined as present to Newton's mind.

[1] The problem is this. Consciousness itself is the most developed empirical thing we know, and it is not surprising that conscious knowing should involve time and space relations, and as we shall see presently in the next paragraph, relations of causality. But these relations do not specially concern consciousness as such, but are categorial. But if togetherness is the most elementary of all relations, and yet we experience when we enter this relation also those of time and space, it would seem that all relation is also temporal and spatial, to say nothing of the other categories. The categories appear thus to come into existence all at once along with bare togetherness. Various questions are thus raised. May there be a unity which is below the level of relations? before there are distinguishable positions in time and space. Such a unity, if it exists, would not be the togetherness we have discussed. Further (to anticipate the next section) if sensory existence, which seems to involve causality and not merely distinction of places and times, is the simplest aspect of *things* and the togetherness of things implies not only time and space but also causality, must we not hold that with the distinction of times and places, there is given also the existence of things? Are then space and time (at any rate space) so immaterial as they are commonly supposed to be and not rather the simplest forms of material existence? I am not able to answer these questions at present. The last in particular, at any rate as regards space, is as old as Descartes. But perhaps the method of examining the actual contents of our experience pursued in this paper may help to the solution of them.

But, whatever answer metaphysics may have to give to these problems of the ultimate constitution of reality, it remains true that no matter what the specific forms of relation are, relation as such, or the most general form of relation, is the mere togetherness which belongs to knowing in its widest sense whether the knower is a consciousness or a material body or a point of space.

sense organs. Whereas in images or thoughts the mental action is not caused by the object contemplated (at least there is always a portion and the distinctive portion which is not so caused), but by something else, either some other mental process or some purely physical internal stimulation. When I see the table, the table affects my eyes; when I image it, I am thrown by some internal cause into the method of mental action to which the imaged table, *i.e.* the table as contemplated with the characteristic defects and advantages of an image, is the appropriate object. It is this circumstance which gives the percept as distinct from the image or the thought its peculiar impersonality in our experience, while in images and thoughts there is always a larger element of personality or idiosyncrasy. But this difference in the actual genesis of the perception affects, it would seem, the experience we have of the relation of knowing in this act. In perceiving, not only are we aware of our togetherness of the object, but as far as I can judge we also enjoy ourselves as the effect of the object which we contemplate. We do not contemplate the object *as* causing in us the perception. On that head enough has already been said when we raised the same question in the simpler matter of togetherness. To do so would be to contemplate both ourselves and the cause, as we contemplate two external things in causal relation. But in enjoying our perception as the effect of the object we contemplate, we are experiencing ourselves in a relation of causality to the object in which we are the effect. This is the enjoyment variously described as the liveliness, or vivacity, or the intrusiveness (*Eindringlichkeit*), or the sensational intensity, of a sensory experience. It may be answered, much in the spirit of Hume upon a similar occasion, that after all though the object causes in us a process of the brain, neither it nor the intervening links between the object and the brain-process are perceived, and the brain-process at any rate we may not even have heard of—without detriment to our perception of the object. But the answer would be irrelevant. For in the first place we do not contemplate the object as exercising contemplated causality upon us (this need not now be laboured further), and therefore our omission of intervening links does not enter into the question. Secondly, while it is true that we know nothing of the brain-process which has the consciousness called the perceiving (that is we do not know it so long as we are perceiving the object), our consciousness that we are the effect of the object is an enjoyment and is not the contemplation of the brain-process. Indeed the fact that we are not aware *of* the brain-process provoked in us

by the external object is the very consideration which most plainly leads (it was certainly this which led myself) to the conclusion that, in knowing, what we are aware *of*, or contemplate, is the object itself, for in all causal relations it is not the effect which the patient is aware *of* but the cause itself, the effect he only enjoys. Thus in every causal relation, instead of saying that the cause exhibits itself in the patient by the effect which it produces, we must say rather that the cause is revealed to the patient as whatever object it is; and the patient is not aware *of* the effect, but only is in a state of enjoyment to which the cause is revealed or by which the patient becomes aware *of* the agent. The causal relation is the one which more forcibly than any other demonstrates the relation of enjoyed and contemplated; and what is learnt from it can then be extended to all knowing.

Thus in sensory experience, as it would appear, it is true (as has often been maintained by philosophers[1]) *on the basis of experience itself* that the mind is causally affected by the object which it contemplates, the perceiving act entering into relation with the perceived object as not only together with it, but as an enjoyed effect of it. And implied in the effect relation are relations of time and space.

Moreover, not only do we in perceiving enjoy ourselves as an effect of the object, but we can trace also in the tendency of our perceptual conation to reaction upon the object the reciprocal causality of the patient upon the agent. Not only is it true as a matter of fact that perceptual conation falls under the same type of reaction to stimulus as we have in physiological response to stimulation, but in the enjoyment of the perceptual conation there is contained the enjoyment of that reaction which compensates action.[2] In other words

[1] This has sometimes been put forward as a postulate, or at least the experiential nature of the fact has not been analysed or explained. Postulates in Metaphysics are to be regarded with the deepest suspicion. Here if anywhere we need not postulates but truths attested by experience, that is as all such truths are ultimately attested, by looking, or intuition.

[2] I do not mean by this that the reaction falls under the head of mechanical reaction, and is equal to the stimulus, but merely that the action of the stimulus ultimately issues in a movement of reaction, whether a practical or a speculative one; and in the second case though there is no outward bodily movement affecting the object, yet even here, however long delayed, there is in the end outward movement of some sort or other. Not that in reaction to a stimulus there is no mechanical reaction. In perceiving a book for example by sight, there is, as I understand from a physicist friend, a purely mechanical reaction of the eye to the pressure of the light upon it. But the chief business of the stimulation is to release a discharge. On the difficulties of the conception of trigger action or *Auslösung* in this connexion, see W. Ostwald's *Vorlesungen ueber Naturphilosophie* (lecture 17).

the enjoyed causality is also enjoyed reciprocity. I have tried to show elsewhere [1] that mere theoretical perception as distinct from practical perception or instinctive action is also a reaction which, instead of altering the object perceived, issues in other mental processes or in words or gestures. But this while it enables us to see that in perception we enjoy ourselves as cause as well as effect, suggests a further problem. For all knowing, even if not perceptual (imagination or thinking), is also shown to be essentially conative and the difference between so-called practical and theoretical activity to be secondary and to turn on whether the issue of the conation is to modify the object or modify the subject's body or mind. Can we then say that even in imagery and thinking, though there is no enjoyment of the effect of the contemplated object, there is enjoyment of reaction upon the object. This would be a paradoxical result. It would imply that we can enjoy causality upon the object without enjoying effect from the object. That such effect does not exist is clear. When a stimulation in a particular region of the brain makes us think of a friend, the imagination (not the image) is the effect of the internal stimulation which we do not contemplate and not of the friend whom we do contemplate. We do not enjoy ourselves as effect, for we do not contemplate the cause. But the idea of the friend may lead to the same manifestations of joy as his actual presence in perception would produce. Can we say then that we react upon an object which did not itself produce our contemplation of itself? We cannot. Strictly speaking the joyful reaction is the reaction on the stimulus which caused the idea, and this cause is not contemplated. Thus imaging involves a less intimate relation with the object than perception. It is together with its object, but we do not experience, that is we do not enjoy in respect of the object, either the character of being an effect of it or of reciprocal action upon it; though in imaging, in virtue of the bodily reaction or of the tendency which we give to our images in train, we are distinctly aware of our causality in respect of ourselves. We only become aware of causality upon the object when the image is replaced by a percept, and then we enjoy being an effect as well. The imaging conation seeks but does not find an object which shall produce the enjoyment of effect and reciprocity; and its function in knowing is thus that it serves partly, as James and the pragmatists say,[2] as leading up through practical preparation

[1] "Foundation and Sketch Plan of a Conational Psychology," *Brit. Journ. of Psych.*, vol. iv., pp. 239 ff.

[2] In saying so I am not accepting the pragmatist account of knowing, that it consists in the ambulatory relation between the idea and the per-

for the direct contact with perceived reality; partly as a step towards thinking.

The case of thinking proper is more complicated, and I am able to touch it only in the slightest fashion. So far as it contains, and it always does contain, ideal elements, it shares that defect with imaging, though its ideas are of quite a different order from images. Since it is speculative willing (a statement for which I must refer to another paper [1]) it involves in a higher degree than imagery the enjoyment of the causality of the thinker. And its result is far different from that of imaging. Imaging finds merely its image. But the office of judging is to establish the connexion of the predicate with the subject of the proposition, to realise the predicate in the subject. Hence judging gives to the ideal predicate the same order of dignity as the subject possesses. If the subject is already presented in sense, as in a judgment of perception, the connexion of the predicate is as real as sense. If the proposition is a universal (The lion is carnivorous) the universal predicate forms part of the reality of the universal subject. The same thing is true if the subject judged is a mere idea of fancy (This fairy had a wreath of roses), or one of memory in any sense of that word (*Paradise Lost* is in iambic measure; he wore a top-hat when I saw him last). Judging, though unlike practical willing, it does not create its propositions, but finds them, yet does thus bring into view the predicate as an element in the subject. And since the act is one of will, and believing is its *fiat*, it is an act of the whole person, and correspondingly the proposition judged is, in being judged, related to the whole world of reality as entertained by that person, which includes all objects of its experience, sensible as well as ideal. Thus, while imaging leaves us with a mere idea, gropes for a sensory object and does not find it, thinking directly or indirectly brings us back into touch with sensible reality. This is true even where our judgment is dramatic, as where we judge the objects of fancy.

cept. If I have not misunderstood, this is the most illuminating way in which the pragmatist conception has been expressed. But this ambulation cannot be knowing, for in having the idea with which the relation begins the cognitive relation is already contained. The ambulation from idea to percept is not cognition in general, but the special case of passing from an imperfect cognition of the object to a completer one. I imagine that this has been overlooked. if it has been overlooked, because of the realistic assumption which pragmatism makes. But if realism instead of being assumed is justified the need for pragmatism disappears. I hope to return to this subject later in connexion with the general problem of knowledge.

[1] *British Journal of Psychology*, vol. iv., p. 262, "Conational Psychology," § 10.

We thus enjoy in thinking our own causality. We do not enjoy effect from the proposition we discover, as we enjoy effect from sensation; but ultimately our object is related to sense.

The Place of Sensation in Knowledge.—The above throws light on the place of perception or, better, of sensation in knowledge. But as the matter lies outside the direct subject of the paper, I mention it in a note. To some extent I shall be repeating in another form what has been said above. In sensory experience alone have we complete enjoyment of action from without and reaction upon it, enjoyed as effect of the object and causality upon the object. Sensory action is causal reciprocity between individuals. It is not merely that sense constrains us. For our concepts constrain us too; the concept triangle compels us to believe its angles equal to two right angles. But concepts do not act upon our bodies, or rather they only do so through their individual instances. Compare ideation with perception: the image does not affect our bodies, and our response to the image, even if it is an image of memory or expectation, is always frustrate. It is in fact the frustration of the conation in virtue of which the object is ideal and not sensory. *Per contra* ideas have advantages denied to percepts. Being in a higher degree selective, they may omit the special features of a percept, and it is a corollary from this that they are more diagrammatic, and nearer to the comprehensiveness of thought. Now contrast both with thought. A judgment may be about a particular, and there may be as in sensation causality from the object judged about. But this is accidental, and the causality from the object about which the judgment is made is causality from a percept and not from a proposition which is the real object of the judging. But the essence of the judgment lies in the success of its ideal conation whereby the object judged is seen in a universal light. From this point of view judgment is higher than sensation, though it lacks, *qua* judgment, the direct causal action from the subject of the proposition, which may be a universal. Thinking is further away from sense than image, which is always particular. But it brings us nearer to sense again. For imaging is eminently personal and thought eminently impersonal. The concepts which thought handles might seem at first sight to be the creations of the mind in a higher degree than images. In fact, images are always vitiated by the personality of the mind. The concepts which thought thinks are the comprehensive laws of things, as it were the immortal individuals of which particulars are but the perishing acts. Thus thinking brings us nearer to the heart of things than images, but needs sense for its completion.

But in all alike we are dealing with things objective to the mind and in that sense real. We may distinguish two senses of real: as actual or true and as merely objective. Now images are just as objective as percepts. Moreover, there is not a single feature in an image which is not the appearance of some actual things. But imagery sees partially and sees confusedly, combining different actualities into the same incongruous picture. Sensations are actual but insignificant. It is thought which supplies them with significance. And in its turn thought finds the completion of its objectivity into actuality in sense.

Why it is that sense has this privileged position that being humblest it is most indispensable is a matter for metaphysical inquiry. It is like the food without which a man cannot live, though if he lived only for food he would not get even food. Certain it is we penetrate farther into the nature of things by thought, but the elementary acts of things, which are *sensa*, remain fundamental.

II.—NOTES ON THE PROBLEM OF TIME.

By J. S. Mackenzie.

The problem of time has not only an intrinsic interest of its own, but is very central and decisive with regard to the general attitude that we are to take on almost all the fundamental problems of philosophy. Is time real or unreal, or, as some would prefer to put it, is it really real or only phenomenally real? Is there time in the Absolute, and is the Absolute in time, or has time only a certain degree of reality as conditioning certain aspects of the world of appearance? Such questions as these carry us down to the very roots of metaphysics, and the answers that we give to them must largely determine our outlook on the universe and our view of the place and significance of human life in it. Now, several recent discussions have, I think, helped to give us clearer views, if not with regard to the actual nature of time, at least with regard to the main difficulties involved in its conception and the way in which they may be met. It is my object in this paper to sum up what appear to me to be the main results of such discussions. In doing so, I think it convenient to connect what has to be said with some of the leading points in Kant's treatment of the subject, and especially with the difficulties that are brought out in the antinomies. He stated these difficulties more fully and forcibly than any one else; and, if we can meet the difficulties that he brought forward, we shall be able to feel that we are in a pretty strong position. In order to set the chief topics in as clear a light as possible, I put them in the form of certain definite questions, stated, as far as possible, in the order in which they are dealt with by Kant.

I. *Is the apprehension of time perceptual or conceptual?* —A good deal of confusion is occasioned in Kant's treatment by the too hasty manner in which this question is answered. Kant decides that time must be regarded as essentially perceptual, and that it may be characterised as an infinite given whole. Now, it certainly seems to be true that there is a perceptual element in the apprehension of time. Beings

that are incapable of thinking, beings that have no notion of number or substance or cause or end, must still, it would appear, have some apprehension of change. To apprehend even the simplest occurrence would seem to imply some awareness of sequence; and it is certain that most of the lower animals do, at least in a practical way, recognise the order in which things have to be taken. A wild cat, we may suppose, is in some sort aware that it has to catch its hare before it can have its meal. But it seems clear that in such a purely perceptual apprehension of time there is no consciousness of it as an infinite given whole. Even a being who looks before and after in a much more definite way than a cat can well be supposed to do, may easily be without any such consciousness as that. It is surely evident, on reflection, that we apprehend time as an infinite whole in the same reflective way in which we apprehend number as an infinite whole. Just as we see that no limit can be assigned to the process of adding unit to unit, so we see that the relation of antecedence and sequence is one that can be indefinitely repeated. Time, therefore, I would urge, is not an infinite given whole in any other sense than that in which number is such a whole. If so, it is clearly conceptual when it is thus represented.

The arguments by which Kant persuaded himself that time is essentially perceptual, are wholly unconvincing; and it hardly seems worth while to consider them here in detail. It may suffice to say that almost all the grounds that are assigned by him for regarding time as perceptual, would justify us in regarding the Universe as perceptual. His chief contention is that what is conceptual is always of the nature of a class notion; and against this we may at once set such concepts as God, the Absolute, the *Summum Bonum*.

I assume, then, that time, though having a certain basis in perception (as most concepts have) may yet rightly—at least when regarded as an infinite form—be treated as conceptual. How far it is right to regard it as an infinite form, is, however, a subsequent question.

II. *Is time to be regarded as a Substance, a Quality, or a Relation?*—Most people would, I suppose, agree with Kant in his contention that time is not to be taken as a substance or quality. The conception of an absolute self-subsisting time—such as Newton appears to have entertained—is generally recognised as having no real foundation. For the present at least we may set any such conception aside. Nor need we very seriously discuss the question whether time

may be regarded as a quality that belongs to certain substantial beings. If we were to take time as a quality, it seems clear that we should have to describe it as a quality that belongs to events; and no one, I believe, regards events as substantial. That it may be described as a relation, is certainly a more plausible view to take. That A comes before B, seems clearly to express a relation between A and B; and such a relation appears to be involved in all apprehension of time. But we may also say that 1 comes before 2, or that the premises come before the conclusion; and in these cases it is at least doubtful whether the relation of before and after implies time. While, therefore, we may say that there are certain relations in time, it may be doubted whether time is properly to be called a relation. Certainly, when we think of time as an infinite whole, we are not thinking of it simply as a relation, but rather as a form or order within which certain relations may be discovered. In this respect also it may be compared with number. The system of numbers is, I think, primarily to be regarded as an order, within which various relations of before and after, greater and less, and the like, may be ascertained. The order of time might be compared also with the order of colours in the spectrum, of intensities in our sense-experience, or of degrees of preferability from the point of view of choice or feeling. In all such cases, an order serves as a basis for the recognition of certain relations; and indeed I am inclined to believe that all relations imply a certain order within which they are apprehended. Time would seem to be essentially such an order, within which the relations of antecedence, coexistence and sequence are contained. Space, I suppose, is a somewhat similar order; but it is one that involves more complex relations.

Time, then, I conclude, is not to be regarded either as Substance, Quality, or Relation; but rather as a Form or Order.

III. *Is time to be regarded as an infinite whole?*—If time is to be taken as a form or order, I believe this question must be answered in the affirmative, so far as concerns its infinity. Every order, I should say, taken simply as such, is necessarily regarded as infinite; *i.e.* there is never anything in an order as such that could justify us in treating any point in it as an end. The order of colours in the spectrum is no doubt a limited order; but its limitations are not due to the order as such. If our senses were finer, we can easily suppose that the order might be indefinitely extended. Similarly, there are no assignable limits to the numerical order, though there

may be limits to the objects to which numerical determinations can be applied. As regards time, there is certainly nothing in the nature of the temporal order as such that could lead us to regard any point in it as a termination; and it seems clear that we cannot even think of a beginning or end without dating it in time. We think of the beginning as something that happens, and that might conceivably have happened sooner; and we think, in like manner, of the end as something that might conceivably have happened later. Hence the concept of time must be taken as being the concept of an infinite order. If, however, time is to be taken as infinite, it must, I think, be erroneous to describe it as a whole. A whole, as I understand it, must mean a determinate quantity, and cannot be supposed to be extensible without end.

Time, then, I should say, is to be taken as an infinite form or order, but not as an infinite whole.

IV. *Is time the form of Inner Sense?*—I think this question must be answered decidedly in the negative. The simplest and most obvious objection is that there is no such thing as an inner sense; but this I prefer not to press, as it may after all be only a verbal point, and might be obviated by a more careful explanation of what is really intended. It is no doubt true that in most cases in which any object is apprehended by us we are aware, not only of the object, but also of the fact that it is apprehended by us; and that, similarly, when we prefer one object to another—whether in the way of what is specifically called choice or in that of simple liking or mere feeling—we are generally more or less definitely aware of the fact that we prefer it. It is probably misleading to call this awareness of our own attitude towards objects a sense; but at least it is a fact of our ordinary conscious experience. We are aware also of changes in our attitudes of apprehension and preference, and so come to regard them as conscious happenings that fall into the time order. This, I take it, is what is meant by saying that time is a form of the inner sense. But this appears to be true only in so far as we are aware of our apprehensions and preferences as involving change, and they are evidently not the only experienced facts that do involve change. Time seems to be apprehended as the order that belongs to everything that is experienced as happening or changing; and there does not appear to be any real reason for regarding the fact of happening or changing as in any special way subjective. Indeed, Kant has himself urged that change involves permanence,

and that we can only have a definite apprehension of permanence and change in their relations to each other when we have some persistent object before us, such as a moving body. Hence I cannot admit that time is, in any special way, the form of inner sense, even when due allowance is made for the unsatisfactoriness of that expression. It is rather the form of the changing. Change is the concrete fact of which time is the formal order.

V. *Can time be held to be only phenomenally real?*—Kant's doctrine of the phenomenal reality of time was met in his own day with the objection that change, at any rate, is real, since it certainly occurs in our own individual experience. Hence time, as the form of change, must also be real. To this he, rightly enough, replies that this only shows that it is, in his sense, phenomenally real. I think it is important to observe, however, that time is in this respect on precisely the same footing as the other orders that we find in our experience—*e.g.* the spatial order, the order of intensities, the numerical order, the order of colours and other sense qualities, the causal order, the order of vital development, the order of preference or value. That objects, as we apprehend them, can be arranged in such orders, is a fact that cannot really be doubted. All that may be doubted is whether ultimate reality, as it is in itself apart from our apprehension of it, falls into the same orders. This doubt may, of course, be met by the deeper doubt, whether it is legitimate to postulate the being of any reality altogether apart from our apprehension of it. But, even if this latter doubt is rigorously pressed, it may still be held that our apprehension of reality may be very inadequate; and this may be held with respect to all the orders to which I have referred, as well as with respect to the time order. All that I wish to urge at present is that all such doubts and counter-doubts have no peculiar reference to time. They affect time just as they affect all the other orders in which objects are apprehended. It seems to me that Kant, in his Transcendental Æsthetic, brings forward no real ground for treating Space and Time on a special footing. The fact that they are forms that we cannot get rid of, is surely not a sufficient reason for saying that we ought to get rid of them. It is certainly not a reason that one would expect from a writer who has so much emphasised the mutual implications of 'ought' and 'can'. Yet there does not appear to be any other reason in the Æsthetic. The real reason, of course, comes later. It appears in the statement of the antinomies; and the kind of difficulty that is there suggested

affects all the orders within which objects are apprehended. And what applies to Kant's arguments, applies, I believe, to all arguments that have been brought forward. The grounds for holding that time is only phenomenally real are grounds that affect all the forms or orders within which the facts of our experience are arranged.

It is well, I think, to add here at once that even the recognition of the phenomenal reality of time and change could hardly be compatible with a purely Parmenidean conception of ultimate reality, such as Kant and some of his followers appear occasionally to suggest. Plato, indeed, seems to have sought to combine the two positions by speaking of time as 'the moving image of eternity'; but it seems clear that a moving image can hardly be the image of a purely statical object. There may be some inadequacy in its representation of eternal reality; but the inadequacy can hardly be supposed to lie in the fact that it contains some sort of movement or change. A similar objection applies to most of the ways in which the phenomenal is contrasted with the noumenal. There may be some inadequacy in our apprehension of the reality of which order in number, time, space, etc., yield us the images; but at least that reality must, it would seem, contain some counterpart of these orders. We shall be in a better position, however, to consider this, after we have dealt with the special difficulties that are raised by Kant. But, before we pass to the consideration of these difficulties, there is one further point in Kant's treatment that it seems necessary to notice.

VI. *Is the causal order to be identified with the temporal order?*—I understand Kant's argument at this point to be that it is only by the help of a definite causal order that an objective temporal order can be established; and further that, as the temporal order presents itself to us as a necessary one, the causal order, which is the condition of its establishment, must also be a necessary one. He finds the necessity which Hume desiderates in the order of time, and then transfers it to the causal order as the indispensable condition of the temporal one. Now, it certainly seems to be true that, if there were no regularity in the sequence of events, it would hardly be possible for us to arrange events in any order that could be recognised as other than arbitrary. The contention appears to me to be very similar to one that might be made with regard to the existence of genera and species. It might be urged that number is a necessary form of our thinking; and that we should have no means of definitely counting

things if they did not fall into certain natural groups. It might thus be contended that certain 'uniformities of co-existence' are necessary for number, just as certain 'uniformities of sequence' are necessary for time. It does not appear to me, however, that any absolute rigour in these uniformities can be established in this way. All that it seems to postulate is a certain back-bone of regularity in the world that we apprehend. Some degree of flabbiness at the margin would not seriously interfere with the possibility of counting or of establishing an objective order of sequence.

We have to ask, further, whether uniformity in the sequence of events is enough to constitute what we understand by a causal order. Kant, I believe, did not really mean this, though he is sometimes so interpreted. Causation seems to involve the conception of explanation as well as that of uniformity, and this appears to be recognised by Kant. He *assumes*, however, that, in the case of phenomenal events, whether in the material world or in our own conscious lives, the explanation of any occurrence is to be found in its uniform antecedent. This appears to me to be an illegitimate assumption; and, in fact, Kant has to admit in the end that such an explanation never does explain. It would be just as reasonable to say that we are to look for the explanation in what follows as in what precedes. No doubt there are reasons that make it more natural for us to look backwards. The future is in general dark to us, whereas the past is comparatively well known; and it is natural that we should look for the explanation of the present fact in what is known, rather than in what is unknown. In reality, however, it does not appear to me that any satisfactory explanation can be found in either direction. Causation, as Kant allows, is a particular application of the conception of ground; and I think Spinoza is right in urging that the only kind of ground that is ultimately satisfying is the apprehension of an intelligible system within which the particular fact falls. In such cases as numerical and spatial relations we do not ask for any cause outside the particular system with which we are dealing. These systems present themselves to us as necessary orders, and we simply accept them as such. It is only when the facts with which we are dealing do not present themselves as parts of a necessary order that we look about for external causes. Events in time present themselves as more or less contingent; and this fact leads us to search for some ordered system within which they may be regarded as falling. We are only partially successful in this quest; but the degree of success that we attain gives us a certain confidence in pursu-

ing it farther. The faith by which scientific inquiry is thus guided is the faith that the apparently contingent is really part of an intelligible order, though the precise nature of that order is unknown. What I chiefly wish to urge here is that there is no particular reason for supposing that the way to discover the nature of that order is by going back to antecedent occurrences. The way in which I wish to apply this contention will appear later.

VII. *Can we think of a beginning of events in time?*—When we regard time simply as the form or order within which events occur, it is evident that there can be no ground for thinking of it as having either a beginning or an end; just as a straight line, regarded simply as a direction in space, has neither beginning nor end. In this respect time might once more be compared with number. Number, indeed—at least when it is treated as essentially ordinal—has a beginning, but we cannot assign to it any end. But the infinite, in the sense of the endless, seems to be a conception that is only applicable to empty forms. Everything concrete is determinate. Though number has no end, there are definite limits to all numerable things—even to the sands on the seashore or the stars in the firmament or the distinguishable moments in the duration of a planet. Can we say, in like manner, that there may be definite limits to the totality of the events that occur in time? If there can, it would seem to imply that there are limits to time itself, regarded as a concrete order of happenings, and not simply as an empty form. The beginning of real change would be the beginning of real time; and, in like manner, the end of change would be the end of time. Nothing could be said to be before the one or after the other. We could only say that there is nothing in the nature of the time order as such to prevent the occurrence of something before the beginning or after the end. Now, can we really suppose that there is any such beginning and end? It can hardly be necessary here to recall the arguments that are given by Kant on both sides. Those who have sought to throw doubt on his conclusion have generally attempted to show that his arguments against the infinity of the time process are inconclusive; but I confess I cannot see how his main contention on this side can be controverted. If events in time have no beginning, it seems clear that an endless series of events has somehow been completed. It puzzles me a good deal to understand how any one who reflects can miss this point; and yet if any one fails to see it —as some evidently do—I hardly know how it can be put

more clearly. I can only suppose that the failure to see it arises from not sufficiently distinguishing between the pure form of time and concrete happenings. The mere form of time can easily be supposed to have no beginning, because it has no real existence. A purely formal series—such as . . . p^n, p^{n-1}, p^{n-2} . . .—need not be supposed to begin or end anywhere; but any concrete event—such as the writing out of such a series—does begin and end. If we start from the present and reckon backwards, there is no reason why we should come to an end at any point; and so we say that, from a purely formal point of view, there is no beginning of the time order. But things that have been happening are not pure forms. To suppose that they have no beginning is to suppose that they have begun and yet not begun—begun sufficiently to reach a definite point, and yet not proceeded from any definite point. Motion is change from some position to some other position. There cannot be a motion from nowhere to nowhere; yet this is what an endless motion would mean. And what is true of motion is true of any change. Change is transition from something to something else, not transition from nothing to nothing. I give these various statements in the hope of making the significance of Kant's contention more apparent; but his own way of putting it is, I think, the right way; and, in the end, if that is not clear, nothing will ever make it clearer.

On the other hand, Kant's argument against the finiteness of the time series does not appear to me to be at all conclusive. 'As nothing can begin to be,' he says, 'which has not been preceded by a time in which the thing that begins was not, we must hold that there was a time antecedent to that in which the world began to be, that is, an empty time.' To this it is, I think, a sufficient answer to say that an empty time is nothing. To say that there is an empty time before it is merely to say that it is abstractly conceivable that something might have happened before. But the question is not with regard to what is abstractly conceivable, but to what did take place. A real beginning would not merely be a beginning *in* time, but a beginning *of* time, in the only sense in which time has any concrete reality. Kant seems to recognise this point more clearly in the case of space than in that of time. He says that 'the relation of the world to empty space would be the relation of it to *no object*'. Surely the relation of a beginning to empty time would be a similarly empty relation. To take the analogy of numbers again, it is no doubt true to say that any integer may be regarded as being generated by the addition of unity to the integer that

immediately precedes it in the order of the numbers. Hence it might be said that we can never make a beginning with such a series; for the number one would have to be thought of as formed by the addition of unity to zero; and, as zero is nothing, this is impossible. But it is surely a sufficient answer to say that unity does not need to be added to zero. It simply steps out and is there as the first of the integers. Similarly, I should suppose that the first occurrence in the universe of events might simply step forward as that from which change sets out. You may object that, in that case, it must be supposed to step forward from the changeless; and that thus the changeless would be the real beginning. Well, there may be a sense in which that is true. The time world may be only one aspect of the universe as a whole. Perhaps it may even be conceivable that there are other time orders that diverge in some way from the time order that we know. I am only urging that the world of time events that we as human beings apprehend may be supposed to have a definite beginning. Such a real beginning *of* time as we know it would not be a beginning *in* time as we know it, and would not need to be related to anything that comes before it. The fact that, from a purely formal point of view, the time order may be supposed to go further back, is a fact of no real importance. In a purely formal way we may suppose something darker than black and brighter than white; but this does not make it any the less true that black and white are the real ends of the scale of brightnesses and darknesses as we know them. In like manner I would urge that there may quite well be a beginning and an end of change; and that this would be the beginning and end of real time. There is, indeed, a difficulty in supposing this; but it is not a difficulty that is specially concerned with the nature of time. It is causal, rather than temporal, in its character. If the events in the universe ever started, we are naturally led to ask—How did they come to start? Did they simply happen to begin? The difficulty here is not with regard to a first point in time, but rather with regard to a first cause. But this seems to be the difficulty that Kant has chiefly in mind with regard to a beginning of the time series. 'Nothing,' he says, 'can come to being in an empty time, for no part of an empty time has in it any condition of existence rather than of non-existence, which distinguishes it from any other part; and this is true, whether we suppose things to originate of themselves, or to be produced by some other cause.' The consideration of this difficulty, however, carries us over from the first antinomy to the third.

VIII. *Can we think of anything that could be regarded as causa sui?*—Against such a conception it is urged by Kant that, at any rate, nothing of the kind is to be found within the time series. 'Every beginning of an act,' he says, 'presupposes a state in which the cause has not yet begun to act, and a dynamically first beginning of the act presupposes a state of that cause which has no causal connexion with the preceding state, and in no way follows from it.' It must be remembered that, notwithstanding this declaration, Kant is afterwards led to affirm the necessity of recognising some form of free causation as a postulate of the moral consciousness; but of course he has to admit that it is wholly unintelligible. Let us ask, however, whether his argument as given in the statement of the antithesis under the third antinomy is valid. It is valid only if the view of causation as involving dependence on a temporal antecedent is a sound one; and this I have already indicated some reason for questioning. Certainly, if everything that happens is to be explained by a previous happening, a first happening would be quite inexplicable. But, as Kant himself brings out in the argument for the thesis, there is in any case no possibility of finding any real explanation of happenings in other happenings. The recognition of this ought to lead us to see that a real explanation must be of quite a different kind. I have already urged that, when any series of related things can be viewed as a systematic order, the particular relations within that order are sufficiently explained by the nature of the system, without reference to any particular causes outside the order. There may, indeed, still be some call for an explanation of the system itself—*e.g.* the system of numbers or of space—as a whole. But it seems clear that the explanation of this at least could not be found in any *happening*. It is hard to see how the explanation of an order could be found in any other way than by bringing it within some more comprehensive order. It is only in the case of apparently contingent happenings that we are tempted to look for an explanation in other happenings; and this fact naturally raises the question, whether we ever find any explanation there.

In what sort of cases can it be maintained that we find an explanation of a happening? It is of course easy to answer that we find explanations of certain happenings, such as the fall of stones or the motions of the planets, by bringing them under a general conception, such as that of gravitation; and it is equally easy to retort that such a general conception does not help us to explain, but only to sum up the facts that call for explanation. A better answer may be found by pointing

to cases in which we can explain a happening by a purpose or by a process that can be teleologically interpreted. When a stone is thrown up, we seem to have a more direct explanation of its ascent than of its subsequent downward path. When we watch the growth of a plant, each stage in its development receives some sort of explanation from the fact that it is leading on to the next. Can it be held that these are instances of a true causal explanation? I think it may at least be held that they bring us somewhat nearer to an explanation than the mere pointing to a temporal antecedent does. The reason is, I should suppose, that they bring us nearer to the recognition of an intelligible order.

It is hardly necessary to remind ourselves here that it was on this account that Anaxagoras seemed to Plato and Aristotle to be a sober man among those who idly babbled. By naming 'Nous' he seemed to point to an intelligible principle of order; and it may at once be asked whether the recognition of such a principle would not suffice as a solution of Kant's antinomy. May not the 'Form of Good,' as Plato might have put it, serve as a sufficient first cause, which may truly be regarded as *causa sui?* I think it is at least worth while to consider this somewhat carefully.

We certainly seem to find in our experience what I have already referred to as an order of preference. Some things appeal to us as being better than others. We also seem to find that this fact of preference may have a place in the causal order. The fact that I prefer one thing to another seems to lead to changes in the way in which images come up before my mind, and sometimes in the way in which bodily movements take place, leading on to movements in other things—in short, to all those phases of experience that are commonly referred to by the term 'activity'. Now, if the recognition of something as good may be a cause, may it not also be a first cause, may it not also be *causa sui?* It is at least in cases in which a good is chosen that we seem to come nearest to what is thus described.

I take the essence of Plato's view to be that the conception of the Good or Perfect is the only one that can be taken as self-explanatory, and consequently the only one that can be accepted as *causa sui*.[1] Socrates is represented as saying

[1] I choose Plato's conception of a Form of Good here, in preference to Hegel's 'Absolute Idea,' mainly because it is simpler and does not raise so many controversial points. But I believe Hegel's conception to be substantially the same. The Absolute Idea is the conception of a self-explanatory system, in which the end returns upon the beginning.

that, if anything could be shown to be the best, he would not ask for any other cause. Of course, this implies a spiritual view of the universe. It is only within a system that is essentially spiritual that the Good could be regarded as an ultimate explanation. But within such a system it certainly seems possible to contend that, if it could be shown that a certain line of development is that by which what is perfect is achieved, the order through which this comes about might then be regarded as a perfectly intelligible order; and it might then be urged that there is no real point in asking for any further explanation. We only ask for explanation, it may be said, when there is some appearance of contingency or disorder: in a perfectly intelligible order no explanation would be called for. Such an order, it seems clear, would have a definite beginning and end; and in this way the time series as a whole would be fully accounted for. Of course it is true that Plato himself did not put the matter quite in this way. He thought of the Form of Good as eternal; and, treating the eternal as timeless, he regarded the time process as only an imperfect copy of the eternal reality [1]—a view that seems to be reproduced in Kant's theory of immortality and (in a different way) in Green's doctrine of the reproduction of the eternal consciousness. But it will be generally agreed, I think, that in that case the appearance of a time process at all is perfectly unintelligible (as Green, at any rate, appears to admit). The question for us here is—Does it become more intelligible if we regard the eternal as containing time, and, if so, can we really regard the eternal as containing time? This leads us to the last question that I intend to raise here. If it can be satisfactorily answered, there seems to be some possibility of finally disposing of Kant's antinomies. I confess I do not see in what other way that would be possible.

IX. *Can there be a time process in the Absolute?*—Certain difficulties at once present themselves to any attempt to regard time as being contained within the eternal; and I must now endeavour to deal with these in the order in which they seem most naturally to come up.

1. It may be urged that what is eternal cannot possibly be

The methods by which Hegel unfolds the content of this Idea, and makes the transition from it to the concrete worlds of Nature and Spirit, are, however, highly controversial.

[1] It does not appear to me that any similar criticism could be made on Hegel. He seems to regard the time process as an essential aspect of the eternal reality.

conceived as existing in successive moments. The essence of time, it may be said, lies in the fact that, when one moment in it is real, all the others are unreal. It certainly seems to me that, if time is to be included in eternity, this view of the nature of time must be denied; and I think some recent discussions about time have helped to show that it is erroneous. I would urge that the most important aspect of time is one that is the very reverse of what is here suggested. It is that no moment in it can ever be taken as real apart from others. If time consisted simply of successive moments, there would be no such thing as time. The existing moment would be verily the only moment of which we could take any account; and that moment would be perfectly timeless. It would be a Now without a Then. No Now that we experience ever has this character. It always, as it were, carries a Then—or rather more than one Then—wrapped up within it. Time does not consist of moments, but rather of the flow that binds moment to moment in a single continuous order. To this it may be added that, in our apprehension of time, there are very various degrees in the adequacy with which its continuity is recognised. We commonly say that the lower animals live in the present, though it is pretty clear that even for them the past and the future are to some extent implied in the present; and also that what we call their present can hardly be regarded as an indivisible moment. In the human consciousness, on the other hand, the reference to past and future is much more explicit; and sometimes, in particular, what is past becomes almost as vividly real to us as what belongs to the present. This does not in any way interfere with the time order, but only with the transience of its constituent moments; and it seems to be a quite intelligible supposition that the reality of the whole time order might be realised by us without its thereby ceasing to be a real time order. We approximate to this kind of cognition whenever we apprehend any complex occurrence as a whole—*e.g.* when we appreciate a tragedy as a work of art. We think of it then as a whole that has a certain permanent being, and yet as a whole that contains successive parts. Its temporal aspect does not interfere with its eternity.

2. It may be urged, however, that this kind of cognition of the continuity of time is, at any rate, only possible after a certain period of time has elapsed; and that, in the case of the time process as a whole, it would only be possible at its close; so that the time process could only be supposed to reveal its eternity in the act of vanishing away. To this I think it must be replied that we certainly cannot think

of the time process as vanishing away. The moment in which its eternity is revealed is the moment in which it appears as a persistent order. The fact of its being an order that consists of successive moments is then seen to be only one aspect of its being. Suppose, by way of illustration, that a human being were to develop to such a complete consciousness of himself that his whole life presented itself before him in all its details as a connected order. Such a being would have reached the end of a time process; yet the whole process, without thereby ceasing to be a time process, would be equally present to him in all its successive parts. Of course, in thus thinking of a particular individual, we naturally suppose that the process of time goes on after he has had this experience. In the case of the universe as a whole, it is perhaps true to say that we can only apply a similar conception by supposing that the end returns upon the beginning; and it is certainly difficult to make this quite intelligible. The consideration of the next difficulty, however, may possibly help us in some degree to deal with this one.

3. The next difficulty that may be urged is that it is hardly possible to understand how such a self-contained and self-explanatory time order could be supposed to begin. At the beginning of it, it would seem, the explanation of it would not yet have presented itself. It would only be implicit or potential; and it may be asked whether this would mean anything more than that it is non-existent. 'A naked possibility is nothing.' To say that anything is implicit is only to say that it is *not* explicit: to say that it is potential is only to say that it is not actual. Yet it would seem that this is all that could be affirmed of the perfect order at its first initiation. It would step out at first, so to speak, in the hope of finding something to account for it at the end. It hardly seems possible to make this intelligible without supposing that the end is in some way present from the beginning. Perhaps the analogy of a tragedy may help us a little again. In reading a tragedy for the first time, or witnessing its performance, it is only when we reach the end that we become aware of its significance as a whole; or, if we have some premonition of it from the start, this is mainly due to the fact that we have had some previous experience of similar tragedies. On a second reading, however, some consciousness of its significance as a whole may accompany us throughout; and for the author some such consciousness may be supposed to have been present from the first. Is it not an intelligible supposition that, in the case of the time process of the universe also, the meaning of the whole may be, in

some such way, present both at the beginning and at the end, and may also somehow be a constant accompaniment throughout the process of its unfolding? I am well aware that the suggested analogy cannot be very closely pressed; but it may at least serve to show that the conception of a rounded whole, which yet contains a time process within itself, is not altogether unintelligible. There are facts in our actual experience that approximate to it; and it is probably only by the help of such approximations that we can ever hope to arrive at any inkling of the secret of the universe. It does not thereby cease to be a mystery. Would it not, after all, be somewhat surprising if the account that we have to give of the nature of the universe as a whole were not in some degree puzzling and mysterious? If our interpretation is not absolutely self-contradictory, that is at least something to be thankful for, and is perhaps all that we ought to hope for.

4. It may, however, be urged at this point that it *is* self-contradictory to suppose that a perfect whole can contain anything of the nature of growth. If it grows, it may be said, it cannot be called a perfect whole at any point in the process. Obviously it cannot have reached perfection at any point *before* the end; nor can it have reached it *at* the end, for, if this were perfect, there could not be any necessity for the process that goes before it. Thus a perfect whole which grows could never at any time *be* perfect. Its perfection would never exist within it, but could only be supposed to be there for any one who might be able to observe it from without. Is this intelligible? Well, I think we may at least answer that we do not really know what constitutes perfection. We only know perfection as the ideal of a limit to which we seem to see certain approximations. Now, it can hardly be denied that some of the most perfect things that we know seem to contain the element of growth; and in some cases this element would even appear to be a necessary aspect of their perfection. I have already more than once compared the universe to a tragedy. It is a comparison that has been recently made by Mr. Russell in a very impressive essay. But I suppose it must be allowed that a tragedy would hardly realise our ideal of perfection. It represents only the Form of Good thwarted and baffled and yet affirming a certain unconquerable excellence that cannot wholly die. But it may be just as conceivable to think of the universe as a sort of Divine Comedy; and, if we add that the significance of the play is in some way present from the first and throughout its course, it is at least not obvious that such a Divine Comedy might not be the most perfect

whole that could be conceived. Have we any positive conception of anything that would be better?

5. It may still be urged, I suppose, that it is not really possible to think of any actual universe as a perfectly intelligible whole; since anything actual is determinate, and all determination implies some negation. However perfect a universe may be, the mere fact that it is a universe seems to imply that it excludes something else that might have been, and the inclusion of which might have added to its perfection. It is vain to speak of a best of possible worlds. What can there be to prevent the possibility of another that would be better? How can there be limits to what is perfect? And yet how, without limits, can there be anything definite at all? There must be some individuality, it would seem, in any actual existence, and that implies some contingency—something that might have been otherwise. It may be urged, therefore, that there must always be some irreducible surd of particularity in the actual universe—something that cannot possibly be made completely intelligible. Does not this necessarily prevent us from regarding the universe as a completely intelligible whole? However well rounded the order may be, must there not be within it something of the nature of an arbitrary exclusion? Any analogy that we may take would serve to illustrate this. Shakespeare's *Othello* was written in English, Dante's *Divina Commedia* in Italian, Goethe's *Faust* in German. We can give very good reasons for this in each case; yet the essential significance of the poems would not necessarily be lost by translation. The language is an accident. Now, the question is—Must not any definite universe contain some such accidents, and how can these be reconciled with the conception of a completely intelligible and self-explanatory system? To this I can only answer that a certain sort of contingency may be a necessary element in a completely intelligible whole. It may be part of its perfection that it might conceivably have been different. Hegel, who is generally regarded as the most thorough supporter of the doctrine of a perfectly intelligible universe, yet seems to admit an element of contingency in Nature; and it is not obvious to me that there is any necessary inconsistency in this. If the nature of the universe is determined by anything that can properly be characterised as a Form of Good, it seems clear that this cannot allow of the exclusion of anything that would make it better; but it is not apparent that it may not exclude something that would be equally good. But, until we know much more than we do about the essential elements in what is good or perfect, it would be rash to affirm that even this is a necessary supposition.

6. But, if this is all that we can say, it may be asked whether we are really helped by such a conception. If we do not know what is meant by perfection, are we any the wiser for supposing that the universe is perfect? May we not just as well suppose that it is a blending of good and evil, and that they have simply happened to come together in a certain combination that we cannot at all explain? May we not suppose that there are certain orders in the universe, but that we cannot regard it as a completely intelligible whole? I think we may. There is something of mystery in the structure of our universe; and it may be that in the end it is an insoluble puzzle. But, at any rate, we can hardly rest satisfied with such a view. So long as there is any possibility of regarding the universe as an intelligible order, we are bound, I think, as intelligent beings, to make an attempt so to regard it. It is the aim of all sound philosophy to show, as far as it can, that, though the world in which we live is puzzling and bewildering, yet the study of it does not lead us anywhere to a blank wall, a blind alley, a sheer contradiction. But the mere entertainment of such an aim seems to imply the ultimate faith that the Universe can be viewed as a genuine whole and that, when fully seen, it is a perfectly intelligible order. My object in this paper has been simply to try to make clear that we need not altogether despair of being able to regard even the time process as at least a part or aspect of such an intelligible order. If this can be shown of time, it certainly seems to me that there is no other aspect of which we need despair. From the first dawn of speculation till now, from the time of Parmenides and Zeno to that of Mr. Bradley and M. Bergson, there has been no other problem that has seemed so baffling as that of time. Yet to doubt the intelligibility of time is to doubt the intelligibility of life itself. Well, if we cannot understand it when we think of it as fleeting, we may perhaps succeed better by thinking of it as eternal. Time, in which all things pass, may itself be timeless, in the sense that it does not pass. It may be an essentially unchanging order in the abiding whole of reality. It may be an inseparable aspect of the life of the Absolute, though the Absolute cannot be held to be in it. Such a view, at any rate, is the only one that seems to me to be finally coherent. I can only think of time as one of those eternal forms that are contained in the life of the Spirit (if Spirit is the proper name) whose dream or vesture or emanation is the Universe. The only intelligible view of the Universe seems to be that it is a comprehensive order within which all the subsidiary orders that we apprehend have a determinate place; and of these subsidiary orders time, it would seem, is one.

III.—THE ANALYSIS OF ΕΠΙΣΤΗΜΗ IN PLATO'S SEVENTH EPISTLE.

By A. E. Taylor.

The question as to the genuineness of the seventh of the thirteen letters contained in our Plato manuscripts is one of considerable importance for the History of Philosophy. If the letter is really the work of Plato, it throws a flood of light on the philosopher's early life, particularly on the nature of his relations with Socrates and the causes by which Plato was led to abandon the career of public life as an Athenian statesman, which would have been normal in a man of his birth and endowments, for the vocation of a φιλόσοφος. It is further, on the hypothesis of genuineness, of great value as giving us an authoritative version of the reasons by which Plato was led in later life to attempt an active intervention in the affairs of Sicily, and his grounds for holding that the death of Dion was no fatal defeat for his "cause". Hence a discussion bearing on the question seems not altogether outside the province of a distinctly philosophical review like Mind. It is not, however, my object at present to examine the whole literary problem created by the *Epistles* in general, or by our letter in particular. In view of the present state of the controversy, I feel justified in assuming that the evidence, both from style and from historical allusions, is overwhelmingly in favour of the view that the seventh *Epistle* is, as it purports to be, a document belonging to the years immediately after the assassination of Dion by Callippus, and presumably, therefore, a genuine letter of Plato. There remains, however, a difficulty which is neither historical nor literary but philosophical, and it is this difficulty which I propose to discuss, and, if possible, to remove. The most remarkable passage in the letter (342 a, 344 d), a digression which professes to give the justification for the well-known Platonic view that "philosophy" cannot profitably be communicated by books, but only by the direct and long-continued personal intercourse of mind with mind in the common pursuit of truth, has given great offence to students who have pro-

fessed themselves unable to perceive its drift, or to feel sure that what meaning it has is genuinely Platonic. I therefore propose, to the best of my ability, to argue that the whole section has a definite purpose, that its leading contentions are in principle sound, and that good Platonic authority can be adduced for them. An examination of the passage is the more indispensable that Constantin Ritter, who strongly defends the genuineness of the letter as a whole, regards this passage as a later interpolation,[1] and that Mr. H. Richards, in his recent *Platonica*, not only speaks of its presence as possibly an "insuperable difficulty" for those who ascribe the letter to Plato, but loads the digression itself with terms of disparagement, such as "rigmarole," "skimble-skamble stuff," and the like.

I will divide my treatment of the subject into two main parts. First I shall urge briefly, against the theory of later interpolation, that the digression is strictly relevant, and indeed necessary, in the connexion in which it stands, and next, in answer to the charge of unintelligibility, I will translate and interpret the passage in question as carefully as I can, adducing such parallels from the Platonic dialogues as suggest themselves to me.

I. *Relevancy.* That a statement showing why it is futile to convey the deepest truths by means of written hand-books (*τέχναι*), is relevant to the matter in hand is clear from what has been said immediately before. The object is to prove that the reprehensible proceedings of Dionysius are no legitimate fruit of the Academic philosophy. For Dionysius had by no means heard the whole Platonic doctrine from its author in the days of their friendly intercourse. Indeed, he had not even asked for a full exposition, for "he professed that he already knew for himself and was sufficiently master of many things in it, and those the most important".[2] Since then Plato has heard that Dionysius has actually written a hand-book (*τέχνη*) on the subjects of their conversation, in which he has gravely misrepresented its purport (*γεγραφέναι αὐτὸν περὶ ὧν τότε ἤκουσε, συνθέντα ὡς αὑτοῦ τέχνην, οὐδὲν τῶν αὐτῶν ὧν ἀκούοι.* That is, he wrote the hand-book on his own initiative, took the credit for its contents to himself and totally misrepresented Plato's views on the matters which had been discussed). The writer of the letter does not know whether this report is true, though he knows of others who have

[1] See his *Neue Untersuchungen über Platon*, Essay 7, *Platon*, i., p. 8.

[2] 341 b, *πολλὰ γὰρ αὐτὸς καὶ τὰ μέγιστα εἰδέναι τε καὶ ἱκανῶς ἔχειν προσεποιεῖτο διὰ τὰς ὑπὸ τῶν ἄλλων παρακοάς*, *sc.* from the imperfect accounts he had received from friends of Plato before Plato's own arrival.

done the same thing, *οἵτινες δὲ οὐδ' αὐτοὶ αὑτούς ;* that is, I suppose, the authors in question had not enough genuine self-knowledge to be aware of their own unfitness for such a task. He will only remark that all past and future writers of books "who profess knowledge of the matters to which I devote myself (*περὶ ὧν σπουδάζω*), cannot possibly, in my opinion, understand one whit of the business. There is not, and God forbid there should ever be, any work of my own on the subject,[1] for it cannot be expounded (*ῥητὸν γὰρ οὐδαμῶς ἐστιν*,—a play on the mathematical meaning of *ῥητόν*, 'exponible') like other branches of learning (*μαθήματα*). It is only from long-continued personal association in the business, and a common life[2] (*ἐκ πολλῆς συνουσίας γιγνομένης περὶ τὸ πρᾶγμα αὐτὸ καὶ τὸ συζῆν*), that suddenly, as it were, the fire bursts forth from one soul and enkindles (*sc.* in the other) a spiritual flame which thenceforth feeds itself" (341 c). Consequently, the letter goes on, if it were really possible to put the "essence of Platonism" into a written book, the proper person to write the book would be Plato himself, the very man who would feel most distress if the work were ill done. Hence "if I had thought these matters could be adequately written about for the general public, and were exponible[3] to it, what nobler task could I have had in life than to write things of so much service to mankind and bring Nature to light for all to look upon?" (341 c). But the author's opinion is that there are very few men who can be benefited by being urged to study such subjects, and they are just those who can be trusted to discover truth for themselves with a little preliminary guidance (*διὰ σμικρᾶς ἐνδείξεως*). In most men the reading of philosophical works either leads to an undeserved contempt for what they find above their intelligence or to idle vanity about their attainments. Thus far the introductory page on which the much-decried bit of analysis follows. The writer then goes on to make a special application of his general thesis to the case of Dionysius. He remarks that the most appropriate test of capacity for philosophy in a "prince" is to give him some initiation into the

[1] *Cf. Ep.* II. 314 c, *οὐδ' ἔστιν σύγγραμμα Πλάτωνος οὐδὲν οὐδ' ἔσται.* If these are not, as I believe them to be, the actual words of Plato, they must be regarded as copied from the present passage, which, in that case, must have been regarded as genuine by the—admittedly fourth-century—writer of *Ep.* II.

[2] That is, from the effort to lead the *βίος φιλόσοφος* is common.

[3] For the repeated play on the word *ῥητόν cf. Rep.*, 546 b; here the word has primarily its literal sense, but there is a pretty clear allusion to the specially mathematical sense to which magnitudes commensurable with a "proposed" standard are said to be *ῥητά* (Euclid, *Elements*, x., def. 3).

subject and then observe the effect, and discover into which of the three classes just enumerated he falls. Such a *πεῖρα* he says he applied to Dionysius. He had one philosophic conversation with him, and found that the young king asked for no more, but claimed to be henceforth qualified to "philosophise" on his own account, and is even reported to have composed a written work on *φύσις*.[1] This gives the opportunity for a long restatement of the familiar Platonic view that written works are an inadequate vehicle of philosophical education. The central part of this restatement is taken up by an attempt to show that the doctrine in question necessarily follows from the nature of the problems of *ἐπιστήμη* on the one side, and the character of written and spoken language on the other. It is this passage (342 a-344 d) to which Mr. Richards takes special exception (though all the time regarding it apparently as an integral part of the letter). The writer then returns to the subject of Dionysius and his book (344 d), and tells us, in effect, the final verdict to which the application of his *πεῖρα* to Dionysius has led him. This is, as we should expect, highly unfavourable (344 c-345 c). Now it seems to me that the whole passage from the end of 341 a, where we first hear of the application of the *πεῖρα* to Dionysius, down to 345 c is so closely coherent that it would be impossible to excise any minor part of it and yet retain the rest. We cannot, for instance, hold that the letter as a whole is genuine, and only the particular digression about *ἐπιστήμη* and language, to which Mr. Richards so strongly objects, spurious. For where, in that case, are we to look for the close of the interpolation? It cannot be placed *before* the return to the case of Dionysius and his book at 344 d, because the allusions in 344 b to the *ὀνόματα*, *λόγοι*, and *ὄψεις* which serve as intermediaries of communication of knowledge are hardly intelligible apart from the full account of what is meant which was given on pages 342, 343, and further because the metaphor of the kindling of the flame of *φρόνησις* and *νοῦς* by the personal intercourse of questioner and answerer in that section is a conscious reversion to the exactly similar metaphor of 341 c. Nor can we reasonably regard the interpolation as ending at 344 d 2, where the letter reverts to the

[1] It would probably be wrong to take the reiterated allusions to *φύσις* as the topic of the conversation with Dionysius and of the alleged *τέχνη* as concerned specially with *φύσις* in the Aristotelian sense. *φύσις* throughout the passage apparently represents the subject-matter of *φιλοσοφία* or *ἐπιστήμη* in general; that is, it means *τὸ ὄν* or *τὰ ὄντα*. So when we read in *Theaetetus*, 173 c, of the mind as *πᾶσαν πάντῃ φύσιν ἐρευνωμένη τῶν ὄντων ἑκάστου ὅλου*, the context shows that this includes ethical reflexion as well as the astronomy and geometry which have just been mentioned.

subject of Dionysius, because, when the long digression has been removed, the words with which the next paragraph opens, *τούτῳ δὴ τῷ μύθῳ τε καὶ πλάνῳ ὁ συνεπισπόμενος εὖ εἴσεται κ.τ.λ.* have nothing left to which they can refer. It is the digression itself (342 c-344 d 2) which is the *μῦθος* and *πλάνος* in question. Consequently Mr. Richards' view that the digression on *ἐπιστήμη* is senseless cannot be held by any one who regards the seventh letter in the main as genuine, unless he is prepared to excise not only the piece of analysis contained in 342-343 but the whole of the pages which deal with the interview in which Plato applied the *πεῖρα* to Dionysius and the results which he obtained.

Thus I think we may fairly say that if there is an interpolation at all it must extend to the whole of the pages which Ritter wishes to excise; every allusion to the supposed "book" of Dionysius must go out. Let us see then what the result of so considerable an excision would be. The genuine Platonic letter will run as follows, if we epitomise its argument from the beginning of 340, where Plato is explaining that in coming to Syracuse for the third time he was sacrificing his own judgment to that of Dion and Archytas who thought well of the "philosophical" qualifications of Dionysius (339 c): "I undertook the journey with grave secret misgivings. When I reached Syracuse I thought it my first duty to find out whether Dionysius had really been 'set on fire' by philosophy, as was reported, or not.[1] The most becoming way of ascertaining this in the case of a prince (*ὄντως τυράννοις πρέπων*, 340 b) is to make it quite clear to him that philosophy is a big thing and only to be acquired by great labour of the mind (*ὅτι ἔστι πᾶν τὸ πρᾶγμα οἷόν τε καὶ δι' ὅσων πραγμάτων καὶ ὅσον πόνον ἔχει, ibid.*). Such discourse, in fact, acts as a spur to the noble mind and incites it to learn how to walk alone without a guide. The true votary is led on to mould his *life* in accord with philosophy in all the affairs of business, and to order his daily conduct in the way which will make him quick to learn, slow to forget, able to reason soberly for himself (340 d). But those who are not true 'lovers of wisdom' at heart, but cherish a mere skin-deep interest in 'points of view' (*δόξαι*, 340 d), will soon grow weary of the prolonged course of study and the daily discipline of the 'affections and lusts,' and give up the quest. Some of them will try to persuade themselves that they are already masters and need pursue no further (*ὡς ἱκανῶς*

[1] *I.e.*, whether what he had learned from Plato on his former visit had kindled a genuine desire to know more. *Cf.* 338 d ff. *φιλοσοφία* throughout the letter means virtually the theory and practice of the Academy.

ἀκηκοότες εἰσὶν τὸ ὅλον, καὶ οὐδὲν ἔτι δέονταί τινων πραγμάτων, 341 a). The proposed test, applied to those who have not the diligence to follow the path to its goal, brings out the difference between the man who blames his teacher for his failure to make progress and him who rightly lays the blame on his own inability to *live* as a philosopher must (*πάντα τὰ πρόσφορα ἐπιτηδεύειν τῷ πράγματι, ibid.*). It was in this spirit that I spoke as I did then to Dionysius." Hereupon, according to Ritter, follows immediately (345 c *ff.*) the account of the growing unfriendliness of Dionysius to Dion, on which Plato remarks that it enabled him "to see accurately how much Dionysius cared about philosophy, and gave him the right to feel indignant," and the narrative then runs straight on with an account of Plato's desire to be allowed to go home and the reluctance of Dionysius to part with him.

Now is it not clear that, as thus restored (?), the continuity of the letter is violated? The elaborate account of the kind of "test" (*πεῖρα*) appropriate to the case of a prince has led nowhither. We are neither told whether it was actually applied, nor, if it was, how it resulted. We have been led to expect information as to whether Dionysius confessed his inability to live up to the standard demanded of the philosopher, or tried to lay the blame for his failure on Plato, or finally posed as having already learned all that Plato had to teach, and being therefore free from the obligation to live any longer *subdisciplina*. This information we get in the letter as it stands, but not in the mutilated form which Ritter regards as original. Indeed, in Ritter's version, Plato is made to ascribe his discovery of the uselessness of further attempts to make a "philosopher" out of Dionysius not to the application of the carefully described *πεῖρα*, but solely to the prince's unworthy treatment of Dion.

This incoherence is so glaring that I venture to say that if the letter had come down to us without the whole passage which Ritter excises, critics would have declared with some reason that there must be a considerable lacuna in the text at the very point where Ritter begins his excision. Some account of the application of the *πεῖρα* to Dionysius would have been rightly felt to be indispensable. But when once so much as this is granted, we have to allow that the coherency of the whole "interpolation" with itself, and particularly the intimate connexion of its beginning and end with what immediately precedes and follows, forbid our resorting to any theory of a minor "interpolation" covering only the two pages 342-343. There is no reasonable way of dealing with the text by excision short of cutting out the whole of what

Ritter regards as "interpolated," and the whole, as we have just seen, cannot be removed without making the letter hopelessly incoherent. Either then the whole letter is spurious, a view which Ritter himself in my opinion properly rejects, or the whole is genuine, and Plato must take the blame for any unintelligibility there may be in the pages which deal with ἐπιστήμη and the reasons which make written books unsatisfactory as instruments for imparting it. This brings me to my second point, the careful consideration of the incriminated passage, and the exposition of its real meaning. I proceed then to offer a translation of the whole passage 341 b-345 c, with such interspersed comments, marked in the text by square brackets, as seem requisite. I will only premise that the reader remembers that the studies which, according to Plato, are particularly effective in producing the intellectual and moral elevation requisite for philosophy are mathematics and dialectic, the former, as commonly taught, being a propædeutic for the latter, and that it was precisely by a course of geometry that, according to ancient tradition, the training of Dionysius for the work of kingship was begun. Consequently we shall not be surprised to find that the account of the difficulties attending the attainment and communication of ἐπιστήμη is specially concerned with the philosophy of the mathematical sciences, though allusion is also made to ethical inquiries. If we bear this in mind, we shall discover that many of the alleged obscurities of the passage vanish of themselves.

II. *Interpretation.* "To be sure, I did not give a *complete* exposition, nor did Dionysius ask for one. He professed, in fact, to know and be adequately possessed of many, and those the most important, matters for himself by reason of what he had imperfectly heard from others. I hear that since then he has even written a work about what he heard at the time, in the form of a Hand-book to Philosophy (τέχνη) by himself, which differs utterly from what he then heard. About this I have no certain knowledge, but I know for certain that others have composed writings on the same topics, though who they are is more than they know themselves.[1] Yet I can state this much of all writers in the past or future who profess knowledge of the matters to which I devote myself, whether on the ground of having learned them from me or

[1] We cannot expect to know who the persons thus referred to are, except that they seem to be pupils with whose performances Plato was not wholly satisfied. Readers with a sense of humour would naturally like to think of Aristotle, but to identify the culprits at all is to be wise above what is written.

others, or as a discovery of their own. It is, in my opinion, impossible that they should understand one whit of the business. At least, there is not, and God forbid there should ever be, any written work of my own about it. [Plato in the main kept his word. We learn a little about the topics described here as *περὶ ὧν σπουδάζω* from the *Timaeus*, *Philebus* and *Laws*, but for the most part we are dependent on the reports of Aristotle.] For the matter is not 'exponible' in speech, like other branches of study. It is only after long fellowship in the business itself [*sc.* the pursuit of the philosophic life; the reiterated *τὸ πρᾶγμα* seems to mean something like 'the grand concern'] and in life together that, so to say, a light is kindled in one soul by the fire bursting forth from the other,[1] and, once kindled, thereafter sustains itself. [The meaning is that there are *μαθήματα*—the rules of composition as taught by Isocrates would be a case in point, and so would 'geometry and the kindred *τέχναι*,' as taught in our school-books with avoidance of all reference to the philosophical problems they suggest—which can be learned from a manual or *τέχνη*. Philosophy, being a 'way of life,' or 'habit of mind,' cannot be compressed into any such spoken or written summary of rules and results. It is only by living daily the life the Master lives, and by lying long open to the influence of his personality that, sooner or later, the soul of the pupil 'takes fire'. After that moment the sacred fire, which required at first to be fed by the example and precept of another, 'feeds' itself. The philosopher is thus not a 'crammer' but a trainer of men. *Cf.* the well-known views on the relation between teacher and taught, and the necessity for intimate first-hand intercourse between the riper and less ripe mind in *Rep.*, 518 b; *Phaedrus*, 274-276; *Theaetetus*, 149-151.]

"And yet I am sure of one thing, that if these matters were to be expressed in spoken or written discourse, it had been best done by myself, and further that I should feel more distress than another if the written exposition were a bad one. Had I thought them 'exponible' and adequately communicable in writing for the public, to what nobler work could I have given my life than that of writing what would be so serviceable to mankind, and of throwing the light of

[1] 341 c, *ἐξαίφνης, οἷον ἀπὸ πυρὸς πηδήσαντος ἐξαφθὲν φῶς, ἐν τῇ ψυχῇ γενόμενον αὐτὸ ἑαυτὸ ἤδη τρέφει.* The context, I think, shows that the *ψυχῇ* is that of the disciple which catches fire from the soul of the Master. One might indeed suppose that only one soul is referred to, and the meaning is that in *either soul* a smouldering fire suddenly bursts into flame, but I feel that this would be Neoplatonic rather than Platonic.

day on Nature for all men? [This sounds arrogant, but the arrogance is only in the sound. It is Plato's apology for giving the public of his time only 'discourses of Socrates,' and not an exposition of his own philosophy. If the Platonic philosophy could have been imparted to the world at large in a book, Plato was obviously neglecting his duty in not writing that book.] But I do not regard the so-called dialectical exposition of these matters [1] as good for any but the few who are capable of discovering them for themselves with the help of a little guidance. As for the rest of mankind, it would fill some of them out of all measure with a mistaken contempt and others with a vain and empty conceit of the sublimity of what they had learned." [*I.e.* some would not understand a written work on φύσις and would despise it as jargon, others, who mistakenly thought they understood it all, would plume themselves on their fancied intellectual penetration and forget that as yet they were only beginners and not proficients. Readers of Herbert Spencer among ourselves illustrate the point. Some of them are led to despise all philosophy as high-sounding jargon; others give themselves airs of superiority on the strength of the supposed intellectual power shown in professing to understand what "the general" are baffled by.]

[The upshot so far, then, is that the result of the πεῖρα was unsatisfactory. Dionysius, by his boasts of his knowledge, had shown himself to belong to the class of men whose philosophy is only skin-deep, inasmuch as he insisted that he had already reached a point at which he had nothing more to learn from Plato, and had even, if reports could be trusted, attempted to expound a philosophy of his own in a book.]

"It has occurred to me to say something more at length about these matters [αὐτῶν I take to be neuter as in the preceding τὴν ἐπιχείρησιν περὶ αὐτῶν λεγομένην and the following λεχθέντων αὐτῶν, though it might conceivably be masculine, referring to the persons just spoken of, for whom the study of philosophy is not desirable]. There is a truth adverse to the pretensions of those who would commit any such matter to writing, a truth which I have often uttered before, but must, as it seems, repeat again now."

[Now follows Mr. Richards' 'rigmarole,' about which I would make one preliminary remark. In the author of the *Laws* and *Philebus*, who, as he says himself in the *Theaetetus*,

[1] For the meaning here given to τὴν ἐπιχείρησιν περὶ αὐτῶν λεγομένην compare *Sophistes*, 239 c; *Laws*, 631 a, 722 d; Aristotle, *Topics*, 111 b, 16. 139 b, 10, and the regular technical sense of ἐπιχείρημα in the *Topics*. The full expression is ἐπιχείρησις τοῦ λόγου, as *e.g.*, in *Ep.* VIII., 352 e.

172 d, regarded it as a mark of the 'liberal' character of philosophical discourses that the speaker is not controlled by a brief, or hampered by a time-limit, but can digress at any moment and to any length he regards as desirable, the passage must not be condemned simply because it is a digression, and to our taste a lengthy one, but only if its contents can be proved unworthy of their alleged author.]

"For everything that is [ἑκάστῳ τῶν ὄντων, *i.e.* for every concept which is an object of scientific contemplation] there are three intermediaries by which the knowledge of it must be imparted [the notion of 'imparting' is suggested by the παρα in παραγίγνεσθαι], and we may reckon the knowledge itself as a fourth thing, the object of it, which is the Knowable or Real Being, being counted as fifth; thus, (1) a name; (2) a discourse [λόγος, the example below will show that he is thinking more particularly of the λόγος τῆς οὐσίας or definition, the 'discourse' which tells you what the thing called by the name is]; (3) an image (εἴδωλον); (4) a knowledge. If you wish to understand what I am saying, you may take one example and conceive all the rest analogously. There is something which we call a circle. Its *name* is the very word we have just uttered. Next comes its 'discourse' [or definition, λόγος], a complex of names and verbal forms [ῥήματα].[1] *E.g.*, the 'discourse' of the thing which has the names 'round,' 'circle' is 'that which has its boundary in every direction equidistant from its middle point'. Third is what we draw and rub out, fashion on the lathe and destroy again. These affections do not belong to the 'circle itself' with reference to which all these operations are performed, clearly because it is something different from what is thus constructed.[2] Fourth, there are knowledge and understanding (νοῦς) and true judgment (δόξα ἀληθής) about all this. These must again all be reckoned as one condition which inheres neither in sounds, nor in the shapes or colours of bodies, but in minds [ψυχαῖς ἐνόν. *I.e.*, knowledge and belief inhere neither in the visible diagrams and models, nor in the spoken words of discourse; they are states of *mind*]. Hence it is manifest that this condition is something different both from the real circle [αὐτοῦ τοῦ κύκλου τῆς φύσεως, where I may be pardoned for remarking that κύκλου depends on

[1] I have rendered ῥήματα here 'verbal forms' on the authority of *Sophistes*, 262 b, where βαδίζει, τρέχει, καθεύδει, and τἆλλα ὅσα πράξεις σημαίνει are said to be ῥήματα, but it is, of course, possible that the sense is more general, and that we should translate 'predicative phrases,' so as to include adjectives used predicatively.

[2] *Cf. Rep.*, 510 b, e, for the point of the distinction between a mathematical diagram or model, and the concept which it is meant to illustrate.

φύσεως, not *vice versa*, αὐτὸς ὁ κύκλος, ὁ ἐν τῇ φύσει κύκλος, ἡ τοῦ κύκλου φύσις are all synonymous in Platonic language], and from the afore-mentioned three things. [That is, the 'circle itself,' which is the object of the geometer's knowledge, is neither a name, nor corporeal thing, nor a physical thing or 'state of mind'; it is strictly what the scholastics call a *universale ante rem*, like all the Platonic εἴδη.]

"But of all the rest understanding (νοῦς) approximates most closely to the fifth [real being, the object of scientific thought], in affinity and likeness; the others stand at a further remove. We must hold the same view of straight and curved figure, of colour, of the good, beautiful, and right, of every body artificially made or naturally generated, of fire and water and their likes [*sc.* not only of bodies but of the popularly recognised στοιχεῖα of bodies, which are, of course, *not* στοιχεῖα at all for Plato], of all organisms and all tempers of the soul, as well as with reference to all action and passion; in all these cases, unless one in some sort acquires the first four, he will never partake fully of the knowledge of the fifth."

[The application of all this to the problem of the communication of knowledge is obvious. To communicate knowledge about an object of thought, you have (1) to use a name for it, (2) to explain what the name means by stating its equivalence to a certain 'discourse' or 'definition,' (3) to illustrate your 'discourse' by actual appeal to diagrams or models,—or, we may add, to the memory-images of them, which like the diagrams and models themselves fall under the general head of εἴδωλα. It is only by these intermediaries that you succeed at last in producing in another a genuine knowledge about the purely conceptual objects of genuine scientific knowledge, and we are to see directly that every stage of the process is attended by grave sources of error.]

"Furthermore, all these processes, thanks to the imperfection of language (διὰ τὸ τῶν λόγων ἀσθενές), are used no less in showing what the object is *like* than in showing what it *is* (τὸ ποιόν τι περὶ ἕκαστον—τὸ ὂν ἑκάστου). Hence no man of understanding will ever venture to put his concepts into language (εἰς αὐτὸ = εἰς τὸ τῶν λόγων ἀσθενές), least of all into language which cannot be altered, as is the case with writings."

[So far the sense is quite free from difficulty, and wholly Platonic. The point is that it is a hard and barely possible thing to communicate profound mathematical and 'dialectical' truth by a written text-book illustrated with diagrams. That Plato distrusted these last we know independently from *Phaedo*, 92 d; *Cratylus*, 436 d; *Rep.*, 510. And for

this very reason he requires in the passage of the *Republic* that 'dialectic' shall be devoid of the help of diagrams (511 b, *αἰσθητῷ παντάπασιν οὐδενὶ προσχρώμενος*), much as the philosophical mathematicians of our own day demand a "geometry without diagrams".[1] This throws light upon the one apparent obscurity of the present passage. What, it may be said, has the alleged ultimate source of all difficulties, the inadequacy of language, *τὸ τῶν λόγων ἀσθενές*, to do with the danger of reliance on diagrams? That there is such a danger we know very well. A diagram is always imperfect, and often suggestive of error, and moreover a diagram can never exhibit a problem or construction in its generality. Thus, to take the simplest examples, Euclid never proves a point which is vital in his very first proposition, *viz.*, that the two circles described from the end-points of his given straight line *have* a point of intersection not lying on the given line.

[1] It may be thought that I am here forgetting that it is not 'geometry and the kindred *τέχναι*,' but dialectic which the *Republic* forbids to employ diagrams. But the fact is that the "philosophy of mathematics," and the treatment of mathematical problems in the light of such a philosophy form a most important part of what Plato calls 'dialectic'. It is not in its subject-matter, but in its method and its success in reaching certain first principles, as contrasted with positions merely assumed for the purpose of argument, that dialectic is discriminated from the other *μαθήματα*, and it is the business of dialectic to justify by deduction from *ἀνυπόθετοι ἀρχαὶ* the unproved assumptions which the ordinary mathematician uses simply as—to employ a technical term which the evidence of Proclus proves to be as old as the first generation of the Academy—*αἰτήματα*, assumptions which are not self-evident, but merely demanded for the sake of argument. *Cf.* Proclus, *Comment. in Euclid.* 188, 8, *τὸ γὰρ αἴτημα κατ' ἐκεῖνον* (*sc.* Aristotle) *δεῖται ἀποδείξεως τινός*; *ibid.*, 76, *οὔκ ἐστι ταὐτὸ ἀξίωμα καὶ αἴτημα . . . ὥς πού φησιν ὁ δαιμόνιος Ἀριστοτέλης, ἀλλ' ὅταν μὲν καὶ τῷ μανθάνοντι γνώριμον ᾖ καὶ καθ' αὑτὸ πιστὸν τὸ παραλαμβανόμενον εἰς ἀρχῆς τάξιν . . . ἀξίωμα τὸ τοιοῦτόν ἐστιν . . . ὅταν δὲ αὖ καὶ ἄγνωστον ᾖ τὸ λεγόμενον καὶ μὴ συγχωροῦντος τοῦ μανθάνοντος ὅμως λαμβάνηται, τηνικαῦτα φησίν, αἴτημα τοῦτο καλοῦμεν.* The reference is to *Analytica Posteriora*, I., 76 b, 23-34.

To avoid misconception about the character of 'dialectic' it is worth while to note that the biological researches of Speusippus known as the *ὅμοια* or *Homologies* appear, as has well been brought out by P. Lang (*de Speusippi Academici Scriptis*, 1911) to have been intended in the first instance as a contribution to 'dialectic' (because they subserve the process of classification), and again that the theory of surd magnitudes in Euclid, X., in the same way aims at making a *classification* of types of surds (see *op. cit.*, Prop. 111, Corollary, which was very probably, as Heiberg suggests, the original conclusion of the book). The work is therefore primarily a piece of dialectic as described in the *Philebus*, as is only natural when we remember that it completes and embodies the researches of the Academicians Theaetetus, Socrates and Eudoxus (see Plato, *Theaetetus*, 147 d, [Aristotle] *de Lineis Insecabilibus*, 968 b 16 ff., Proclus, *op. cit.*, 66-68 on these mathematical pioneers. The passage of the *Theaetetus* itself represents the study of surds as from the first a problem in classification.

He is apparently contented to take this for granted on the strength of the diagram, though it can be, and ought to be, proved. In I., 2, his figure only illustrates one of several possible "cases" of the general problem, and so again in I., 47, the proposition would be equally true of squares constructed on the inner sides of the straight lines which compose the triangle, but the diagram does not represent this case. But what connexion have these considerations with the "inadequacy of discourses"? Simply, as I suppose this, it is the inadequacy of ψιλοὶ λόγοι to render mathematical reasoning generally intelligible which drives the mathematician to eke out his "discourse" by appeals to always imperfect and often misleading diagrams and models. The ordinary man will not take in what is meant by the statement, nor be able to fix his attention on the steps of the reasoning, without some such helps for his imagination. So, again, the propositions of Euclid V. hold good of all ratios between magnitudes of any kind, those of Euclid X. for any surd magnitudes of the types discussed, but as aids to the imagination the writer regularly employs two special kinds of magnitudes, lengths and areas. And in X. we see that this habit has reacted on his thought and language; he constantly speaks of surd "lines" and "rectangles" as though the propositions he is enunciating held exclusively of lines and areas.[1] The same considerations account for the allusion to the distinction between the ὄν and the ποιόν τι and the stress which our passage goes on to lay on the confusion between them as a source of fallacy. The way in which the distinction appears in geometry is well illustrated by some remarks made by Proclus in connexion with the classification of Euclid's propositions as "theorems" and "problems". The distinction between the two, he tells

[1] This may be illustrated by the distinction kept up throughout the book between the surd expressions called respectively μέση and μέσον. The μέση (the full expression is μέση εὐθεῖα) is defined at X., 21, as the straight line whose square is equal to the rectangle under two straight lines which are only δυνάμει σύμμετροι. Thus, *e.g.* $\sqrt{a}\sqrt{b}$ would be a μέση since (if a and b are integers, and b not a square number), a and $\sqrt{b}$ are δυνάμει μόνον σύμμετροι. The μέσον (full expression μέσον χωρίον) is the rectangle under two μέσαι which are σύμμετροι whether μήκει or only δυνάμει (X., 24). Hence $\sqrt{ab}\,\sqrt{cd}$ satisfies the definition of a μέση if you regard it as the square root of $ab\sqrt{cd}$; it satisfies that of a μέσον if you regard it as the product of $\sqrt{a}\sqrt{c}$ and $\sqrt{b}\sqrt{d}$ (premising, as before, that c and d are not square numbers). The apparently hard and fast distinction between the type μέση and the type μέσον really depends only on the arbitrary selection of a straight line or a rectangle to symbolise a surd magnitude. The irrelevancy of the εἶδωλον is here the source of a confusion of thought.

us, had not originally been universally admitted in the Academy. Speusippus had regarded all geometry as composed exclusively of "theorems," Menaechmus had held that all propositions of geometry are "problems" (*Comment. in Euclid.* 77-78).

Thus the dispute, since Speusippus had taken sides in it, may not unreasonably be held to go back to the life-time of Plato himself, as Speusippus only survived his uncle by a few years, and was already an elderly man when he became head of the Academy.

Proclus goes on to trace the effect of it upon the views of later thinkers, and tells us that "Posidonius and his school defined the one as a proposition in respect of which it is asked whether something exists or not, the other as a proposition in which it is asked 'what is it?' or 'of what sort is it?'" (*op. cit.*, p. 80), a view which exactly corresponds to the modern doctrine that "problems" are existence-theorems.[1] It is in accord with this view that when Proclus comes to comment on Euclid's first "theorem," Prop. I., 4, he justifies the arrangement by which the proposition is preceded by the familiar "problems" I., 1-3, in the following way. "How was Euclid to instruct us about the *συμβεβηκότα καθ' αὑτό* of the triangles, and the equality of their angles and sides without first constructing the triangles and providing for their genesis? Or how could he have assumed sides equal to sides and straight lines equal to other straight lines if he had not already considered this by way of problems and achieved the finding of the equal straight lines? For suppose him to say, before constructing them (*i.e.* before showing how a triangle or a straight line equal to a given straight line can be constructed), 'If two triangles have the following property (*σύμπτωμα*), they will also in all cases have such-and-such a second property'; would it not be easy for any one to retort on him, 'But do we know whether a triangle can be constructed at all?' Or suppose him to go on, 'If the two triangles have two sides of the one equal to two sides of the other'—might not one raise the question, 'But is it possible that there should be two equal straight lines?' . . . It is to

[1] Friedlein's text makes Proclus say that it was the *problem* which Posidonius regarded as investigating "what the thing is" (*op. cit.*, p. 80, l. 22, *τὸ δὲ πρόβλημα πρότασιν ἐν ᾗ ζητεῖται τί ἐστιν ἢ ποῖόν τι*). As this contradicts not only Proclus's previous statement that the doctrine of Posidonius was derived from "Zenodotus who belonged to the succession of Œnopides" and taught that "a *theorem* asks what is the *σύμπτωμα* predicated of the matter under consideration," but also his further account of the views of Posidonius himself, I can only suppose the word *πρόβλημα* to be a mistaken gloss on *τὸ δέ*.

anticipate such objections that the author of the *Elements* has furnished the construction of triangles (*sc.* in I., 1)—for his procedure is equally applicable to all three kinds of triangle—and the genesis of equal straight lines. This last he has achieved in a double form. He both constructs such a line in general (I., 2), and constructs it by cutting off a segment from an unequal line (I., 3). Thus he reasonably makes the theorem follow on these constructions" (*op. cit.*, 234-235). In the light of Proclus's account of the antiquity of the question about the distinction between theorems and problems, it seems natural to me to suppose that it is to this that the language of our passage alludes. The sense then will be simply that the effects of the inadequacy of language are felt in problems and theorems alike.]

"I must, however, repeat the lesson I am now giving. Every one of the circles which are drawn or fashioned on the lathe by actual manual operation (ἐν ταῖς πράξεσι) is full of the opposite of the Fifth, I mean, it is everywhere in touch with the Straight. But 'the circle itself,' so we say, has neither more nor less in it of the nature of its opposite. [*I.e.* no actually described physical disc is ever absolutely circular. At any point you please you can make it coincide throughout a finite distance with a physical 'straight' line. So, one might also say, in the diagrams of our Euclids, the so-called circle and tangent can always be seen by any one to coincide throughout a perceptible distance. But 'the circle itself,' the 'mathematical' circle of which Euclid is speaking only coincides with the tangent at a 'mathematical' point.] So we say that none of them [*viz.*, the 'physical' figures referred to] has a fixed name. There is no reason why those we actually call round should not have been called straight; yes, and the straight ones round. The names would be just as fixed if we interchanged them. [*E.g.* to revert to the example I have just given, we may imagine a diagram in which the so-called tangent coincides throughout a visible interval with the so-called circle. Then, the so-called tangent is not *really* straight, nor the so-called circular arc *really* circular. So if you were to cut out this bit of the diagram and consider it by itself, it would not matter which of the visible lines you called the arc, and which the tangent.][1]

"Further the same must be said of the 'discourse,' since it is made up of names and verbal forms (ῥήματα). There is

[1] Or is it simply meant that we might—since names are a matter of "convention"—have used the word "straight" to mean what we actually call "curved"? This is true, but I do not see how it can be regarded as giving rise to any difficulty.

no sufficiently fixed fixity in it. [*μηδὲν ἱκανῶς βεβαίως εἶναι βέβαιον.* This is an obvious consequence. If a mathematical term gives rise to ambiguity owing to the possibility of its being taken as standing for something we can see and draw, *a fortiori* the same must be said of a definition or other proposition containing many terms.] And there is no end to be said (*μυρίος δέ λόγος*) in the same way (*αὖ*) of the ambiguity (*ἀσαφές*) of each of the four [*sc.* *ὀνόματα, λόγοι, εἴδωλα, δόξαι*]. But the principal point is that we mentioned just now. The *ὄν* and the *ποιόν τι* are two different things. But when the soul is trying to know the *What* (*τί*), not the *ποιόν τι*, each of the four presents it, in word or in fact [*λόγῳ τε καὶ κατ' ἔργα*, where *κατ' ἔργα* refers to the construction of the sensible diagram or model] with that after which it is not seeking,[1] and thus renders what is being stated and demonstrated open to refutation by the senses, and so fills everyone, speaking roughly, with confusion and perplexity. Accordingly in matters as to which, from our evil upbringing, we have not so much as learned the habit of seeking for truth, but are satisfied by any image of it which presents itself, we do not make one another ridiculous in the process of question and answer, by our ability to tear in pieces and refute the four; but in cases in which we are obliged to answer about the fifth and point it out, any one who has the will and the ability is equal to overthrowing <his antagonist> and can make the exponent <of a truth> in speech or writing or answers to questions [*i.e.*, dialectical inquiry] appear to most of his hearers to know nothing about the

[1] These are perhaps the most difficult words in the whole of the passage. What are we to understand by this substitution of the irrelevant question for the relevant? I think we may explain the matter as follows. The mind is said to be inquiring into the "what" of something, and the reference to a diagram or model as the source of the confusion, shows that the something is a mathematical line or figure of some kind. Its *τί* or "what" will therefore be its defining characteristic, and to "inquire into" this *τί* will presumably mean to "construct" the curve or figure or what not, to establish its "existence". You will be committing the inconsequence spoken of if you attempt to demonstrate the *συμπτώματα* of the line, curve, figure, before showing how to construct it, *i.e.*, before proving that it is one of the objects contained in the geometer's universe of discourse. Thus Proclus's already-quoted observations about the reason for placing Euclid I., 4, after I., 1-3, amount to urging that Euclid would have committed the fault in question if he had investigated certain *συμπτώματα* of triangles in which two sides and the included angle of the one are equal to two sides and the included angle of the other, without having proved by implication (as Proclus assumes he has done), that a pair of such triangles can exist.

A more modern illustration would be attempting to establish some theorem about the tangent to a given curve at any point before you have ascertained that the curve has a tangent at any point.

matter on which he is undertaking to write or speak, since the audience often forget that it is not the mind (ψυχή) of the writer or speaker which is being refuted, but only one or other of the four, thanks to its ill constitution.[1] It is the process through them all, the transition forwards and backwards in the case of each, that at last hardly gives birth to knowledge of the well-constituted in a well-constituted <mind>. But if <the mind's> constitution be ill (and this is most men's case both with respect to acquiring knowledge and with respect to acquiring what is called character), and in part also corrupted, Lynceus himself could not make such men see."

[We may, I think, illustrate the whole passage in the following way: Let us suppose a mathematician to be dealing with a branch of his study which owes its fundamental principles to the researches of the Academy, the Geometry of the Conic Sections. Let us further suppose that he is aiming at proving the existence-theorem that there are three such curves and no more; a task which, of course, involves the establishment of a correct definition of each of the three by reference to some exclusive property—an answer to the question τι ἐστι. It is at once obvious that any ambiguity of language may introduce great difficulties into the communication of his investigations on such points to others. But the same thing is equally true of the diagrams by which he attempts to remedy the imperfections of language, and make his meaning definite for his hearers. Thus, for example, if we formed our notions of the ellipse from the diagrams of the text-books, we should probably be struck by the inequality of the two

[1] *I.e.* the man who is attempting to express a true proposition may employ ill-selected terms, or a badly expressed or otherwise imperfect definition, or may attempt to illustrate his meaning by a diagram which does not represent the relations with which he is dealing adequately. You may then make it appear that he is uttering a paradox or that what he says is at variance with what can be seen in the diagram. But you have not in this way proved that what he meant to assert is false. Thus, for example, Aristotle's "refutations" of the Platonic views about the εἰδητικοὶ ἀριθμοὶ turn in effect on denying that a surd expression such as $\sqrt{2}$ is a *number*. ("All number is composed of ones," etc.) This, however, is no criticism of Plato's meaning, but only of his terminology. So, again, it is no disproof of the existence of "transfinite" numbers to say that the arithmetic of "transfinites" contradicts the axiom that "the whole is greater than the part". The contradiction merely shows that the axiom only holds good of collections with a finite number of terms, and is, therefore, as it stands, badly expressed. Or, finally, you do not refute a proof that a given curve has no tangent at a given point (say the "origin") by drawing a diagram in which it looks as if there were a tangent at that point. You only show that the diagram does not represent what it stands for correctly.

axes of the curve, which the diagrams usually make prominent, and we might be led to think this inequality a universal characteristic of ellipses. This would lead to entire misconception of the relation of the ellipse to the circle, since we should fail to see that the circle is only one special case of an ellipse, in which the eccentricity of the curve is = 0, a mistake which was actually committed by Herbert Spencer when he contrasted circular orbits as "homogeneous" with elliptic orbits as "heterogeneous". Or, again, the teacher might wish to prefix to his treatment of the separate 'conics' a general account of the properties of the 'general conic'. For the benefit of his readers or hearers, he would probably illustrate his propositions by diagrams. But in any one diagram the figure will not be a 'general conic,' but definitely either parabolic, elliptical, or hyperbolic, and this may lead the beginner to confuse the properties of conics as such with those of the special conic figured in the diagram. Or, yet again, and this illustrates the remarks about the ease with which a smart *ἀντιλογικὸς* can make the mathematician look ridiculous, the lines which in a figure represent the asymptotes to an hyperbola can be seen to be such as would soon meet the line which stands for the curve, if both were produced, and the side and diagonal of the "square," measured by our rough appliances, will seem to have a common measure. Hence an *ἀντιλογικὸς* who insists on regarding the figure as the actual object of which a proposition is enunciated can readily make it seem that the geometer is uttering paradoxes which an appeal to the senses will explode. It is *à propos* to remember that the subtle arguments of Zeno were for centuries supposed to be idle though ingenious sophisms which might be set aside by such an appeal, though in fact they go down to the roots of mathematical philosophy. Thus we can understand what the writer means when he says that the whole series of intermediaries by which knowledge is imparted, name, definition, diagram or model, belief as to the teacher's meaning, is attended at every stage by possibility of misapprehension, and that it is only by a repeated dwelling on each of the four and comparison of it with the rest (*e.g.* repeated transition from written text to diagram, and back again from diagram to text), that the truth which the teacher is struggling to express at last dawns on his pupil's mind. For this reason alone, it would follow that, as has been already maintained, long personal association in the pursuit of truth is necessary if one philosopher-mathematician is to train up another. The same difficulty would meet us, as the writer says, in the attempt to impart knowledge of any kind but for

the fact that in our daily life we are commonly content with some thing far short of the ideal. We think it enough that those to whom we communicate our ideas should form a mere rough-and-ready approximation to our meaning. This is *e.g.* all that is commonly arrived at when a man makes a speech on a social or political topic. He does not expect his audience to take in all that he means, or to frame very precise notions of the "liberty," "order," "progress," and so forth of which he speaks. He is satisfied if they catch his meaning "there or thereabouts". But it is the great merit of the *μαθήματα* as a mental discipline that a "there or thereabouts" standard of comprehension is not tolerated in "geometry and the kindred arts".

So much for the sense of the passage. A word on the reference to Lynceus the sharp-sighted with which it ends. Mr. Richards finds this nonsensical, and asks whether Lynceus was supposed to be able to infect others with his gift of vision. I think this a serious misunderstanding of a phrase which in itself is simple enough. Every one knows that if *e.g.* you take a country walk with a keen-sighted friend, he is likely to call your attention to all sorts of minute or distant objects which you can see well enough for yourself after your attention has been directed to them, but would otherwise have passed by unnoticed. It is in this sense that Lynceus is spoken of as able to make other men see things. And it is in this same ability to call a pupil's attention to what he would otherwise have overlooked that a good teacher may properly enough be compared with a keen-sighted companion whose range of vision is longer than one's own.]

"In a word, if there is no affinity [1] between a man's mind

[1] For the thought that Philosophy demands kinship between the Reality known and the mind that knows it, see *Republic*, 490 b, *οὐδ' ἀπολήγοι τοῦ ἔρωτος, πρὶν αὐτοῦ ὃ ἔστιν ἑκάστου τῆς φύσεως ἅψασθαι ᾧ προσήκει ψυχῆς ἐφάπτεσθαι τοῦ τοιούτου—προσήκει δὲ συγγενεῖ κ.τ.λ.* As the *Republic* passage shows that the thought is closely coloured by the imagery of the *ἱερὸς γάμος*, the allusion in *συγγενής* may not impossibly be to the Attic Law of the heiress, by which the hand of the orphan *ἐπίκληρος* fell of right to the next-of-kin. In any case, the meaning is that mere quickness in learning and good memory will never make a philosopher. A special elevation of soul and a peculiar gift of insight is indispensable. Historically we can trace back the thought that the highest intelligence is *akin* in a special way to the worthiest objects of knowledge to the Orphic belief that while the body to which a soul is temporarily assigned consists of materials drawn from its physical surroundings. the soul itself. being a divinity, comes from "heaven". *Cf.* Xenophon, *Cyropaedia*, viii., 7, 20 (in the course of an argument for immortality manifestly drawn for the most part from the *Phaedo*), *διαλυομένου δὲ ἀνθρώπου δῆλά ἐστιν ἕκαστα ἀπίοντα πρὸς τὸ ὁμόφυλον πλὴν τῆς ψυχῆς* (earth to earth, etc.). *αὕτη δὲ μόνη οὔτε παροῦσα οὔτε ἀπιοῦσα ὁρᾶται*, where the suggestion plainly is that the soul also departs at death, *πρὸς τὸ*

and our study (*τὸ πρᾶγμα*) mere quick receptivity or good memory will never create such an affinity [with *οὐκ ἄν ποιήσειεν* we have clearly to understand *συγγενῆ*, so that the construction is *τὸν μὴ συγγενῆ οὔτε εὐμάθεια οὔτε μνήμη ποιήσειεν ἂν συγγενῆ*]. For it absolutely refuses to make its appearance except in a kindred soul. Hence neither those who have no natural attachment and affinity to righteousness and whatsoever else is fair, though they may be quick to learn and steadfast to retain other knowledge of various kinds, nor yet those who have this natural affinity but are slow to learn and forgetful,—none of these, I say, will ever fully master the truth about virtue and vice.[1] (< I say 'virtue *and* vice' > because both must be learned together, and similarly truth and falsehood about Real Being as a whole have to be learned together, and this, as I said at first, demands much time and practice (*τριβή*)). It is only in consequence of a reciprocal friction of them all, names, discourses, visual and other perceptions, with one another and the testing of them by kindly examination and question and answer practised in no spirit of vain-glory (*ἄνευ φθόνων*), that the light of sound judgment (*φρόνησις*) and understanding (*νοῦς*) flashes out on the various problems with all the intensity permitted to human nature.[2]

ὁμόφυλον, to its cognate gods ; Aristophanes, *Clouds*, 229, *εἰ μὴ κρεμάσας τὸ νόημα καὶ τὴν φροντίδα λεπτὴν καταμείξας ἐς τὸν ὅμοιον ἀέρα* (where the allusion is to the theory of Diogenes of Apollonia—also mentioned in the *Phædo* as one which had interested Socrates,—that air is, as we should now say, the vehicle of intelligence) ; *cf.* also the lines of the Orphic plate from Petelia, *εἰπεῖν · Γῆς παῖς εἰμι καὶ Οὐρανοῦ ἀστερόεντος, αὐτὰρ ἐμοὶ γένος οὐράνιον κ.τ.λ.*, and those found at Thurii, *καὶ γὰρ ἐγὼν ὑμῶν γένος ὄλβιον εὔχομαι εἶναι κ.τ.λ.* The humorous parallel of Plato's *Timæus* between the shape of the human head and the shape of the *οὐρανός* is a fanciful expression of the same central idea.

[1] *εὐμαθία* and *μνήμη* are similarly demanded as qualifications of the philosopher at *Republic*, 486 c-d, but there, as here, they form only a very small part of Plato's requirements. He also demands a *passion* for 'truth' or 'reality,' indifference to the satisfactions of appetite, "high-mindedness" and freedom from all pettiness of soul (*ἀνελευθερία*) and from all unworthy fear, and various other qualities which are here aptly summed up in the requirement of a "natural affinity" to the object of philosophical study.

[2] The metaphor of the sudden breaking out of the flame forms, of course, a link with 341 c-d, but it is ingeniously prepared for by an almost untranslatable play on words. It has just been said that much *τριβή* 'practice' will be required for the acquisition of philosophy. The writer then echoes the word *τριβή* in the *τριβόμενα* of the next sentence, where he speaks of the process of repeated alternations of attention between the words and *λόγοι* of a demonstration and the diagrams to which illustrate it, as one of "friction". This leads naturally to the image of the insight which results from the process as a light kindled by "friction". This gradual preparation through an apparently scarcely conscious figurative use of a common word for a full-blown metaphor has always seemed

"Wherefore every worthy man (*πᾶς ἀνὴρ σπουδαῖος*) will beware with all caution of bringing worthy matters into the range of human rivalry and perplexity by writing of them. In one word, one must learn from what has been said that when one sees written compositions by an author, whether laws written by a legislator, or writings of any other kind soever, these were not the matters the writer deemed worthiest, if indeed he is himself a man of worth; such things [*sc.* the things the writer deemed *σπουδαιότατα*] are laid up the fairest place the man possesses.[1] If he indeed committed them to writing as things of greatest worth and moment, 'why then, thereafter,' not gods but men 'bereft him of his wits'.

"Well then, he who has followed this discursive tale will know full well that whether Dionysius, or any other man, greater or less, wrote down any of the highest and primary truths of Nature, he must have had no sound instruction nor understanding of anything of which he wrote, at least not according to my conviction. Else he would have had the same awe of these themes as I have, and not have exposed them to the eyes of discord and uncomeliness.[2] He could not have been impelled to write them as memoranda for his private use (there is no danger that one whose mind has once compassed the truth should forget it, for it is contained in the briefest words). It must have been done, if it were done at all, from an unseemly vanity, whether the purpose was to claim the knowledge as his own, or to prove his participation in an education of which he was unworthy if he was greedy of the reputation of having participated.

to me characteristically Platonic. The point of the remark that the philosopher has to learn *at once* *τὸ ἀληθὲς* and *τὸ ψεῦδος* is, of course, that in the use of dialectic it is precisely by seeing where unsatisfactory hypotheses are false that we are led on to a truer one.

[1] *κεῖται δέ που ἐν χώρᾳ τῇ καλλίστῃ τῶν τούτου*, that is, *ἐν τῇ ψυχῇ*, or more precisely *ἐν τῷ νῷ*; the truths which are of most moment in the opinion of a good and wise man are written on the "fleshly tables of the heart," not on tablets of wax or sheets of parchment. He bears them about with him and does not need to store them in a library.

[2] *εἰς ἀναρμοστίαν καὶ ἀπρέπειαν ἐκβάλλειν*. If Dionysius had really any understanding of philosophic truth, he would have avoided casting it before swine. He would not have exposed it, by circulating his *σύγγραμμα*, to the disordered and lewd minds of his court circle. Or is it merely the symbols of language and diagram which are judged, for the reasons already given, too "ill-fitted together" and too "mean" to express high truths? I think the former interpretation right, since it is conceded that the writing of the *σύγγραμμα* would have been allowable if the principles of Platonism were so many and required such lengthy statement that a man might need a written record to assist him in remembering them. The offence was thus not so much the writing as the publication of it.

"Now if Dionysius was affected thus by our only interview (perhaps it might be so, though *how* it happened 'Goodness only knows,' to use the Theban phrase, for I went over the subject in the way I have described, and that once only, and on no second occasion[1]), he who would learn how the effect fell out as it did, must ask himself why we did not go over matters a second and third time, and yet oftener. Does Dionysius after a single hearing fancy that he has knowledge, and has he really sufficient knowledge, whether from discoveries of his own or from previous instruction by others? Or does he think my exposition worthless (*φαῦλα τὰ λεχθέντα*)? Or, for this is the third possibility, does he think the subject beyond him and admit that he has not the ability to live in the practice of wisdom and virtue? If he thinks the exposition worthless, he will find himself in disagreement with numerous witnesses whose judgment in such matters is of much greater weight than that of a Dionysius.

[1] In this difficult sentence I would punctuate thus: *εἰ μὲν οὖν ἐκ τῆς μίας συνουσίας Διονυσίῳ τοῦτο γέγονεν,—τάχ' ἂν εἴη, γέγονεν δ' οὖν ὅπως "ἵττω Ζεύς," φησὶν ὁ Θηβαῖος· διεξῆλθον μὲν γὰρ ὡς εἰπόν τε ἐγὼ καὶ ἅπαξ μόνον, ὕστερον δὲ ὑπώποτε ἔτι—ἐννοεῖν δὴ δεῖ . . . τίνι ποτ' αἰτίᾳ τὸ δεύτερον καὶ τὸ τρίτον πλεονάκις τε οὐ διεξῆμεν·* That is I take, *εἰ μὲν οὖν—γέγονεν* as a protasis to which *ἐννοεῖν δὴ δεῖ κ.τ.λ.* forms the apodosis. The general meaning is "I only spoke with him once; hence the question arises why we did not go over the ground again and again". The three possible explanations of Dionysius's conduct in not asking for a second interview, *viz.*, that he thought himself after the first conversation competent to carry on his studies by himself, that he thought what he had heard disappointing, that he felt unequal to the demands of philosophy on his intellect and character, correspond to the three possible results of the *πεῖρα* suitable to a prince enumerated on p. 340.

As for points of detail, I assume with some hesitation that *γέγονεν δ' οὖν ὅπως ἵττω Ζεὺς* stands for *ἵττω Ζεὺς ὅπως γέγονεν*, "we may leave it to Zeus to know *how* it happened," *i.e.* "only God can say how it came about". Hence I have removed Burnet's comma after *ὅπως*. In the apodosis I would also remove the comma after *τὸ τρίτον*, since Plato is insisting that there was only *one* interview, and the *οὐ* must therefore negative the whole clause *τὸ δεύτερον καὶ τὸ τρίτον πλεονάκις τε*. The only point now left obscure is the meaning of the *τοῦτο* of 345 a 1. *What* is it that might be supposed to have happened, God knows best how, to Dionysius after his interview with Plato? Apparently the *τοῦτο* means the "compassing of the truth" referred to in the previous sentence (*ἐὰν ἅπαξ τῇ ψυχῇ περιλάβῃ*), so that the whole sense is, "if Dionysius really understood that part of the subject which I put before him at our only interview.—perhaps he did, though God knows how he could,—why did he not seek further instruction?" Two explanations, *viz.*, that what, on the supposition, he already knew was enough to qualify him to philosophise for himself in future. or that he was disappointed in what Plato had to say. are then examined and dismissed, and the implied, though unexpressed conclusion is that the only remaining alternative, *viz.*, that he felt his unfitness for the vocation of a philosopher, must be the true one. (I should say that I owe this explanation of the reference of *τοῦτο* to a suggestion of Prof. Burnet.)

If he holds that he has discovered the truth or been instructed in it, and that it is at any rate worthy of a liberally-educated mind, how could he ever have been so ready to affront one who had been his master and guide in these studies, unless he is a very singular fellow? The nature of the affront I can explain from personal experience."

The concluding paragraphs of our passage from 344 a 1 on do not seem to me to require any particular explanation or elucidation. They merely restate for us the view which had long before been expressed in the *Phaedrus* of the one reasonable ground on which *written* works on *φιλοσοφία* may be defended, *viz.*, that they serve to refresh a man's fading memories of the actual converse in which two minds have followed up the trail of truth, and urge that that ground is not pleadable on behalf of the work ascribed to Dionysius. Either his character or his judgment is proved to be bad by his seeking no second interview with Plato, and his boasts of his own proficiency,—and Plato inclines strongly to the view that the defect is not merely one of judgment. I have therefore to confess that if my interpretation of the two pages against which Mr. Richards' strictures are specially directed is substantially accurate, I see nothing either in the matter or in the manner of the whole digression which interferes with the ascription of the letter as we have it to Plato. And I think I have already shown that (*a*) the whole passage as I have rendered it is too much of a unity for one-half of it to be excised without the excision of the remainder, and (*b*) that if the whole is excised the result is immediately a sensible gap in the continuity of the letter. Whence I conclude that for those of us who lack the face to condemn the whole letter on the flimsy grounds which have been urged against it, apart from the objection to this particular section, the only alternative is to recognise the whole as from the hand of Plato. We may feel that Plato's hand has lost something of its cunning; there are unnecessary repetitions in the narrative, and the grammatical construction is sometimes loose, though both charges may be made with equal truth against *e.g. Laws*, vii.-ix. But these are no remarkable faults in a man well over seventy, and most of us, even in our prime, do not carry out in correspondence, and should not employ even in a published pamphlet to which we had purposely given the form of a personal letter, the same strict rules of composition as in a formal treatise or essay.

I will add only one further remark, which seems to me of some weight. The seventh epistle, whether by Plato or not,

bears every mark of being a genuine document of the date at which it purports to have been written. We have only to compare the Greek of it with that of the *Axiochus*, a dialogue composed, as Immisch has convincingly shown, by a member of the Academy, at the time when Epicurus was just coming into notice at Athens as a philosopher (*i.e.* within half a century or less of Plato's death), to judge whether so long a work, so exactly in a style which was rapidly becoming a lost art as early as 300 B.C. is likely to be a successful forgery. If a contemporary of Crantor and Polemon, familiar with the works of Plato, could not attempt a "dialogue of Socrates" without betraying himself in well-nigh every sentence, is it likely that some other Academic, even as early as the writer of the *Axiochus*, could have composed a letter of such length in a Greek which is, to us at least, indistinguishable from that of the *Laws*? The *Epinomis*, indeed, has been quoted as an example of such imitation, but the argument is worthless until some better evidence than that of a *φασὶν* in Laertius Diogenes has been produced against the Platonic authorship of the *Epinomis*. Moreover, even those who think the *Epinomis* an imitation at least account for its exact correspondence with the style of Plato by assigning it to an immediate intimate and personal companion of the master. If we are to ascribe the seventh letter to another than Plato, I do not see how we can avoid a similar view of its origin. It will have to be regarded as a manifesto in the name of the Academy, produced at the latest within a very short time after Plato's death. Indeed, I think, we may go further. Such a manifesto could hardly have been written after the direction of Sicilian affairs had been put into the hands of Timoleon in 344, and it is scarcely more likely to have been later than the horrible catastrophe which ended the tyranny of Dionysius in Locri (346). Thus we are driven to date the supposedly spurious letter before Plato's death, and to assume that, even if he did not actually write it, it was composed in his name and with his approval. It follows that if the philosophical digression which we have been examining is "rubbish," it was rubbish which imposed on Plato and was taken by him for an expression of his own theories. I, for one, cannot believe in such a theory. The only rational view of the matter, to my mind, is that a letter which purports to have been written by Plato shortly after the death of Dion in 353, cannot have been written later than 346, and is indistinguishable in style from Plato's latest work, really was written by Plato, and that its philosophical part is therefore very unlikely to be "rubbish" and very likely to be excellent sense.

IV.—THE ETHICAL SYSTEM OF RICHARD CUMBERLAND AND ITS PLACE IN THE HISTORY OF BRITISH ETHICS.

By Frank Chapman Sharp.

I.

The System.

A careful study of the ethical system of Richard Cumberland in its relations to its predecessors and successors will show it to be one of the three or four most powerful influences in the history of British ethics. Such an examination will also bring to light certain of its elements whose very existence appears to be almost unknown to-day, but which were among the factors of most importance in determining the subsequent course of ethical thought. Some of Cumberland's most valuable teachings have with the lapse of time been so far lost to ethics that we of to-day may still profit by going to school to him. Whatever, then, may be the nature of our interest in the thought of the past, we may find it worth our while to examine with some care the system of this great, though now almost forgotten, moralist.

The fundamental problems of ethics which are treated by Cumberland may be formulated as follows: What modes of conduct are right? What is meant by the predicate *right?* Furthermore, since the standard of right is described wholly in terms of the good, two other problems present themselves: What elements of life are intrinsically good? What is meant by calling them good? Finally, if we are to obtain an adequate view of the system we must inquire what are the motives of the moral life.

Cumberland's answer to the first of our questions is well known. The sum of the moral law is "the endeavour, to the utmost of our power, of promoting the common good of the whole system of rational agents" (Introd., sec. ix.; *cf. ibid.*, sec. xxiv., par. 1; ch. V., sec. ix., pars. 6 and 7; ch.

VIII., sec. xiii., par. 1).[1] Of this system the agent himself is an integral part. He is no more a zero than he is the whole. "The measure of good things every one is entitled to, and may rationally seek, is no otherwise to be determined and settled than by that proportion he bears to the system of all rational beings, or to the whole natural kingdom of God" (V., xlvii., 5; *cf.* I., xxxiv., 6; V., lvii., 2; IX., iii.). Of this great organism God is a member, and since he has desires whose satisfaction depends upon our action we have a duty to him as we have to our fellow-men. "It is not to be doubted but that in our actions, obedience and imitation of his care of the common good of mankind . . .; in our words and thoughts and affections, honour, worship, and love are more agreeable to his beneficent nature and more acceptable to him than neglect or hatred or direct and wilful opposition. . . . Therefore, as we know by the help of our senses that it is more acceptable to any man to be loved and honoured than to be hated and despised, so it is evident to reason by a manifest correspondence that it is more grateful to the supreme rational, God, to be loved and honoured by the obedience of men than to be the object of hatred and contempt" (Introd., x., 1). Benevolence to our fellows is not a corollary from piety to God, but a parallel duty. The one and the other spring from a common root, the spirit of disinterested service (Introd., xv., 1; I., iv., 3). Indeed it is declared that in the development of the individual the love of man must precede that of God (V., xiii.); an echo, doubtless, of an excellent statement, commonly ignored in the discussion of this subject, which may be found in the First Epistle of St. John.

A duty to animals is excluded not merely by the words, "the good of rational agents," but also by an explicit statement (V., viii., 3). There seem to have been several reasons for this position. First animals are declared to be too alien in nature from man to arouse his active interest in their good (I., xiv., 1, 2; II., xviii., 1). In the second place, the order of claims upon our service is sometimes thought of as determined, not by the comparative amount of good achievable but by "the measure of the beneficence" of those served; and animals are apparently ranked very low indeed in this scale (*cf.* V., xlviii., 2; xlix., 1, 2, 3, with I., xiv., 1, 2, as above). The formula occasionally found (*e.g.*, I., ii)., "the common good of all beings, especially such as are rational," may be the sign of certain misgivings with regard to this position.

[1] All quotations are from the translation of John Maxwell, London, 1727.

Turning now to Cumberland's definition of right we shall find that for him the right means the rational. He offers, indeed, no formal definition of the term, but its meaning appears with perfect clearness in the course of the attempt to prove that "the greatest good of all is the right end for every rational being". Every demonstration, or attempted demonstration of this assertion is based, in the last resort, upon the assumption that the proper goal of human endeavour is discovered by determining what is the end or what are the ends prescribed to man by reason.

This appeal to reason is not a flight for refuge to innate ideas. "I have not been so happy," he writes, "as to learn the laws of nature in so short a way" (Introd., v.). By reason he means nothing other than the cognitive powers of the mind, whatever they may be, and by the frequently employed phrase "right reason," these same powers so used as to lead to truth (II., v.). That the adjectives true and false are applicable to moral judgments he so little thinks of doubting that, though he affirms it again and again, he can scarcely be said to give it serious discussion. The methods of attaining truth are numerous, each of which has its own place in the guidance of conduct. Among them is enumerated what is, of course, at the foundation of all else, the principle of contradiction (V., xii., 4; *cf.* also II., vi., vii.). In the moral world, also, since truth is everywhere the same, the fundamental dictate of reason will be, Avoid contradicting thyself in thy actions. "I judge it requisite to the natural perfection of the human will that it follow the most perfect reason, both in its calmer resolutions, which are simply called desires and aversions, and in those more vehement ones, which usually go under the name of passions. Hence we may perceive that actions contrary to these are imperfections and diseases of the mind, as lameness or paralytic and convulsive motions are symptoms of diseases of the body. Such are the assents given to contradictory propositions, because it is certain that one member of a contradiction must be false" (V., xii., 7, 8; *cf.* II., vi., 2).

What, then, is the connexion between avoiding contradictions and aiming at the greatest good of all? The answer starts from a certain position with regard to the attitude which the individual ought to take towards his own greatest attainable happiness, in so far as he may abstract from the effects of his action upon the welfare of others. In cases of conflict between this and any less good of his own, reason requires him to choose the first alternative. "I affirmed that the entire and chief happiness possible [of the agent] was

aimed at in them [*i.e.* the sanctions of the moral law], because all men naturally and necessarily desire, not any part only thereof, but the whole which seems possible to them, according to the will of the First Cause. And this desire is highly rational, and evidently more conducive to our perfection than the desire of any less good" (V., x., 1. See also V., xvi., 2, *sub fin.*; xxii., 5; IV., i.). The rationality of this comprehensive desire undoubtedly depends, for him, upon the principle that the choice of a less good in preference to a greater is the same sort of contradiction as the affirmation that the whole is equal to or less than a part (*cf.* Introd., xi., 2). But since, in his opinion, every one will readily admit the obligation whatever its justification, Cumberland, who writes wholly with an eye to practice, does not think it necessary to spend much time in searching for its foundation.

The next step in the argument is the proof that reason requires us to prefer the greater good of another or others to the less good of self. Its briefest clear formulation is found in chapter V., section xix. Cumberland is arguing from the moral standards of man to those of God. "If any man rightly judge that the common good of all who act according to the rule of reason is a greater good than the good or happiness of one man (and this is no more than to judge the whole to be greater than its part), there is no doubt but that God thinks the same. And it will come to the same thing if it be affirmed that the happiness of all is greater than the like happiness of any smaller number. But that happiness is the greatest which is greater than any other assignable. Nor is it a different judgment that by which we affirm the greatest happiness of all rational beings is the greatest or chief end which any rational agent can pursue. . . . Therefore there is no room to doubt but that we shall here also have God's concurrence. For since he himself is rational, and it cannot be conceived how he can act rationally without proposing an end to himself, nor can there be a greater end than the aforesaid aggregate of all good things; we cannot but think he judges this to be the best end he can propose to himself."

This cool identification of the greatest, in the sense of the most extensive end, with the best, in the sense of the right end, will seem to many readers nothing better than a juggler's trick. But the ideas which lay beneath it and which gave it its significance to Cumberland will appear if we bring into clear view the presuppositions upon which the argument rests.

It must be remembered that the egoistic theory which our

author had in mind—like most of those before and since—was based upon the principle that a man ought to choose his own greater good in preference to a smaller one. The greatest attainable good for self is the best or right end. If then it could be shown that, in principle, a man owes an equal duty to his neighbour with himself, Cumberland's conclusion would follow. But this, in his opinion, can be done. The mind "is inconsistent with itself when it determines to act after one manner in relation to itself, and after another manner in relation to others that partake of the same nature" (I., vi., 4; *cf.* V., xiv., 2). When he says "inconsistent," he conceives himself to be saying "guilty of self-contradiction," for he treats these two terms as identical (see *e.g.*, V., xxi., 2). Hence the following is, for him, but another way of repeating the same statement: "As 'tis a perfection of the human mind to form like judgments, so it is to entertain like affections concerning like things. To have contrary judgments of like things implies a contradiction, and is a kind of madness, and, in speculation, is shunned as a disease of the mind. In practice it argues as great an imperfection, and is a direct contradiction, in cases perfectly alike to have different judgments and different volitions, according as myself or another is concerned" (V., xvi., 5).

The same conclusion is elsewhere reached by a somewhat different path. As against Hobbes he maintains that it is incompatible with the very conception of an objectively existing code of rights and duties to assert that any individual is justified in pursuing his own greatest good to the detriment of the good of the whole. If a right is "not something merely chimerical and fictitious but [is] to be considered as something real and existing without the imagination . . . it immediately follows that contradictory propositions concerning the right of any two to the same things or persons cannot be the dictates of right reason". But this subjective theory of rights, it is declared, is the very foundation of "Hobbes's scheme" (II., vi., 2). The reason is obvious. An egoistic theory must affirm the right of every one to everything he can lay his hands upon. But such a position is easily reduced to an absurdity. "If right reason instructs Titius that his greatest happiness, which he is to pursue as his ultimate end, consists in the enjoyment of a plenary property in the possessions, and an absolute dominion over the persons of Seius and Sempronius, and of all others, right reason cannot dictate to Seius and Sempronius that their happiness, the object of their pursuits [*i.e.*, the object which they are morally justified in pursuing], consists in the enjoyment of

plenary property in the possessions, and dominion over the person of Titius and of all others. For these contain a manifest contradiction; and, therefore, only one of these dictates can be supposed true. But, since there is no cause why the happiness of one of these should be his ultimate end [*i.e.*, the end which he is morally justified in pursuing as his all-inclusive end] rather than the happiness of another should likewise be his ultimate end; we may conclude that reason dictates to neither that he should propose to himself his own happiness only as his greatest end, but to every one, rather his own in conjunction with the happiness of others; and this is that common good, which we contend is to be sought after" (V., xvi., 2; *cf.* II., vii.; V., xxx.). Since there are but two ends that can urge a serious claim for acceptance, namely, the greatest attainable good of self and the greatest attainable good of all (V., xvi., 1), the refutation of the former leaves the latter in possession of the field. The device, since become popular, of denying in the name of egoism the existence of all morality Cumberland did not consider, because he never thought of it. Nor, for that matter, was any such idea in the mind of Hobbes, despite all that has been said about the latter's ethical scepticism.

Thus Egoism involves itself in contradictions at every turn. Nevertheless it starts on the right track because it asserts the duty of choosing one's greater good in preference to the less. Its errors are due to a failure to think out to the end the implications of this initial principle. When that work has been done the conclusion will be seen to be unavoidable that the sum of reason's law is to aim at the realisation, as far as lies within our power, of "the greatest good of all".

The content of the right must be described, as we have found, in terms of the good. What then is the meaning of good? Cumberland's negative answer seems as definite as could be demanded. He repudiates with vigour the view of Hobbes that good means the desired as such. "I, on the contrary, am of opinion that things are first judged to be good, and that they are afterwards desired only so far as they seem good." His positive view he attempts to state in words which immediately follow the preceding: "A private good is that which profits one, public, which is of advantage to many; not because it is desired from opinion, whether true or false, or delights for this or that moment of time. The nature of man requires that reason examining the nature of things should, from the evidence thence unalterably arising, first determine and judge what is good (whether in relation

to ourselves or others), before we desire it or are delighted therewith" (III., ii., 2). Good thus means that which profits. But this information does not carry us far, for the profitable means that which is conducive to happiness, whereas happiness, in its turn, is defined as the enjoyment of good things (I., v.; *cf.* II., iii., 2; V., xii., 6). Cumberland, who surpasses many of his successors in that he sees the necessity not merely of stating the content of the right but also of defining the term itself, has not devoted the same attention to the concept of the good.

We get more definite results when we turn to the inquiry, wherein happiness is held to consist, more specifically whether it is described in terms of Hedonism or of Perfectionism. To be sure Sidgwick in the *History of Ethics* (p. 173), and in the end, Albee (*History of English Utilitarianism*, ch. II.) have declared that an answer is impossible because of the ambiguities which pervade our author's discussion of this subject. Ambiguities there doubtless are, and there seems to be at least one contradiction to the view otherwise maintained. Nevertheless a careful collation of all the data seems to render the conclusion unavoidable that Cumberland is a Hedonist.[1]

Once or twice, indeed, he refuses to answer the question as to the basis of value because he regards it as a matter of no great practical importance. "I have no inclination very curiously to inquire whether the happiness of man be an aggregate of the most vigorous actions which can proceed from our faculties; or rather a most grateful sense of them, joined with tranquillity and joy, which by some is called pleasure. These are inseparably connected, and both necessary to happiness" (V., xiii., 1; *cf. ibid.*, xii., 2, and xlii., 1).

Nevertheless at other times he finds it well within the scope of his plan to consider whether one or the other of the elements of this organic whole may not be the essential factor in its value, and his conclusion is always the Hedonistic one. Thus when he is arguing that we are affected with love of present and hope of future good earlier in life than with

[1] The one passage of significance which appears to be irreconcilable with Hedonism is the latter part of the following citation, which continues the quotation (above) from III., ii., 2. "It is the part of brutes only to measure the goodness of things or of actions by affections only, without the guidance of reason. . . . It is however more certain that a madman suffers a real evil though he be wonderfully pleased with his own madness; and on the contrary that a remedy is good for the patient though he should ever so obstinately refuse it." It should be said, however, that an ingenious commentator could so interpret these statements as to make them entirely consonant with Hedonism.

hatred or fear of evil, he bases his assertion upon the following grounds: "No man therefore loves life, health, or such grateful motions to the nerves and spirits as we call corporeal pleasures, or desires their causes that he may avoid death, diseases, and pain, but because of their intrinsic goodness, or positive agreement (to borrow a phrase from the schools) with the nature of our body. In like manner, no man therefore desires the perfections of the mind barely that he may avoid the uneasinesses of ignorance, ill-will, envy, and commiseration, but because of that superlative pleasure which we experimentally find in such acts and habits, which is the reason that to be deprived of them is most ungrateful" (Introd., xiv.; *cf.* II., iv., 4; V., ix., 1; xlvii., 3). Similarly the frequent recommendations of the active life are invariably based upon the fact that it is accompanied by pleasurable emotions (*e.g.* II., iv., 1-4; V., xiv., xv.).

Further evidence to the same effect is found in the list which is given of good things. The most important of these is declared to be the exercise of our bodily and mental powers when they are in full health and vigour. But "corporeal pleasures," or "agreeable sensations," are repeatedly included (*e.g.*, Introd., xiv.; II., iii., 2; iv., 4). Finally, there are many discussions which proceed upon the assumption that the only differences in things good are quantitative (*e.g.*, II., iv., 8; V., x., 1; xii., 6), while the existence of qualitative distinctions does not appear as the basis of a single argument.

The conclusion just reached will prepare us for a statement of the principles upon which we value moral excellence—the "perfection" of V., xii., as quoted above, page 373. It is valued primarily as a means to the attainment of things intrinsically good, whether for self or others. "Upon this head the Stoics are to be reprehended, who affirmed nothing to be good but virtue, nothing evil but vice. For whilst they endeavour to establish the transcendent goodness of virtue and the egregious evil of vice, they incautiously entirely take away the only reason why virtue is good and vice evil" (V., v., 1; *cf.* III., iii., 1).

Cumberland recognises that this principle of valuation may be applied to one's own character as well as to that of any one else. For if the happiness of others may be the direct object of my desire, as our author maintains it can be, I may value my own good habits not merely for what they bring me in the way of rewards, in the ordinary sense of that term, but also because they are the guarantee of the attainment of the larger end (*cf.* V., xlv., 3, 4). Apart from this a second

reason is recognised for valuing character, namely, its beauty (Introd., xxii., 4; V., xvi., 5; xxxi., 1; xxxii., 3). The recognition of this fact does not necessarily place a man outside of the boundaries of Hedonism, as is shown by the writings of Shaftesbury. This moralist has much to say about the love of virtue for its own sake. The value which he attributes to character from this point of view consists, however, in joy in its contemplation and possession, as distinguished from those advantages which follow virtue as one link in a chain follows another (*The Moralists*, Part III., sec. 3; *Characteristics*, vol. ii., ed. of 1732, pp. 422, 434; *Philosophical Regimen*, edited by Benjamin Rand, pp. 54, 55, 59). A comparison of these passages with *De Legibus Naturæ*, V., xvi., 5; xxxii., 3; xxxv., 8, will show that this was precisely Cumberland's position, though he did not state it quite so clearly as did his successor.

Cumberland is thus an Ethical Hedonist. His attitude towards Psychological Hedonism is more difficult to determine. His statements regarding this subject are vague and fragmentary. They appear also, at least at first sight, to be contradictory. On the one hand he asserts that all desire is aroused by the idea of the good, whether of self or others (V., xii., 6; *cf.* above, p. 376). On the other hand he stigmatises as nonsense the view which makes happiness the only end of action—and happiness, for him, as will be remembered, is merely the enjoyment or possession of the good. "To assign happiness as [the] object or end [of action] is not satisfactory. For since happiness itself . . . is confessed to consist in action, to say we act for happiness is to say no more than that we act that we may act" (V., xiii.; *cf.* II., iv., 4; V., xiv., 1, 3). Obviously where a pleasure depends upon an activity reaching its goal the activity must precede the pleasure, as Butler, later, explicitly maintained. However, it is not certain that we are here beyond the confines of Universalistic Psychological Hedonism. For the glory of God and the happiness of our fellow-men are at once presented as objects of action. With the difficulties of this position we are not concerned. We are in this place interested only in the fact that it was actually taken. In any event the view of Butler that pleasure arises only from the satisfaction of desire is not maintained. The attainment of sense pleasure is a possible end, and there is no suggestion that the pleasure in this case necessarily follows and is dependent upon the desire. On the whole, in view of his repeated assertions as to the relation of desire and the good, we shall do best to set him down as a Psychological Hedonist of the universalistic type.

To be sure it passes as an axiom among certain moralists that Psychological Hedonism is necessarily egoistic. The apparent axiom would turn out, if examined seriously, to be nothing better than a prejudice, like many other ethical "axioms" which have had their day in the schools. If Cumberland was a Psychological Hedonist it is certain that his mind was quite innocent of any such conception. It never occurs to him seriously to doubt the possibility of desiring for another what one desires for himself. He confines his efforts in this field, therefore, almost exclusively to asserting the actuality of such desire. It is true that he does not get much beyond bare assertion. This is, indeed, his limitation throughout. One of the richest of all moralists in ideas, ideas which have demonstrated their value through the *rôle* they have played in the subsequent history of ethics, we are all too frequently disappointed by the meagreness of the evidence offered in their support. This statement holds for the case before us. What we are given is an impressive and, at bottom, unequivocal assertion of the principle that the good of another may be to me a direct object of desire, in the same sense in which my own good may be. "I also own it possible through an abuse of his free-will that a man (through his own fault) of a narrow soul, may consider nothing beside himself, and may, therefore, desire almost nothing but what he judges profitable to himself; but I could never observe any symptoms of such a will in any man except in Hobbes only. Others are certainly of a more generous disposition who do not think that alone to be good which is such to themselves; but whatever conduces to the preservation and perfection, to the order and beauty of mankind, or even of the whole universe, as far as we have any conception of it, that they think good, that they will and desire, that they hope for for the future, and rejoice in when present. Nor see I anything to hinder but that what I judge agreeable to any nature I may desire should happen to it; nay, that I should endeavour, as far as in me lies, that it should be effected" (III., iv., 2. See the entire section. *Cf.* also V., xii., 6; xiv., 2; xlv.-xlvii.).

All through this and practically every other discussion of this subject there runs a principle which lies at the very foundation of the system—the principle, namely, that egoism and altruism have the same psychological root. The good as such, independently of its relationship to this or that possible possessor, tends to arouse the desire to realise it. Of this fundamental desire, self-regard and benevolence are but two different branches. The details, as far as they are

given us, are as follows. The first element of the moral life to appear is the desire of the good as such. This is non-rational. Then reason—here used as a name for our intellectual powers as a whole—enters with its ideas of greater and less, cause and effect, and others not specifically named. This new factor operates upon the object of the desire by extending its boundaries until finally, if the full maturity of reason is reached, the object of the desire has expanded until it includes the whole of one's life, and the lives of all other rational beings (IV., i., ii.; III., iv., 3; V., xlv., 3, 4; xlvii., 2, 3). The precise nature and source of the motive power of these creations of reason are left—probably with deliberate purpose (IV., i., 5)—for the reader to work out for himself.

In the foregoing paragraph we have described how reason enters as a motive power into conduct. There exists no aversion from the contradictory in conduct, *per se*. But when a man is placed before alternative courses of action, reason presents the ideas of the greater and the less good, and applies them to the possibilities which the situation creates. The former idea necessarily determines the direction of volition except as the reason affirms that to be the greater good which it has just pronounced to be the less,[1] or as the desire for the less good succeeds in defeating its rival. In either case the man has contradicted himself, and has thereby, as we have seen above, failed of moral truth, or, in other words, has committed a wrong.

This however is not the end of the matter for the guilty agent. "Such a contradiction, above all others, greatly hurts the soundness, peace, and contentment of the mind in its actions" (V., xvi., 5; *cf.* xxxvi., 4). On the other hand he who acts with consistency "acts agreeably to his intellectual nature. And what is agreeable to nature, gives it pleasure" (V., xiv., 2). This pleasure is not a satisfaction due to the maintenance of logical consistency in conduct, as such. As stated above, the existence of a feeling of that kind is not recognised. Wherever the satisfaction in question is described with any definiteness, it is always represented as the joy of tranquillity, or of peace between the desires (Introd., xx.; I., vi., 4; V., xvi., 5).

These pleasures and pains, like all others, are capable of serving as motives to action, and because of their alleged intensity, as very powerful motives. They do not occur alone. Along with them arise other pleasures and pains, some of which are almost, if not quite as intimately con-

[1] So I interpret the words, "Unless the understanding judges falsely or inconsistently," in V., xiv., 2.

nected with the moral quality of the action. Such are the enjoyment of the beauty of a harmonious life, joy in the felicity of other beings, and the consciousness of the favour of God. Others again are more remote; they make up the extrinsic effects of the action upon the happiness of the agent. The existence of these effects, intrinsic and extrinsic, is an empirical fact. The consideration that the feelings in question follow the deed not by chance, but as a result of the structure of the human mind in its individual and social capacity, that this mind, in its turn, is the creation of God, so that the existence of the relationship between act and feelings is a clear indication of the will of God concerning us —these considerations lead us to the conception of obligation, the discussion of which occupies many, many weary pages of the book.

Obligation is defined as "that act of a legislator by which he declares that actions conformable to his law are necessary to those for whom the law is made. An action is then understood to be necessary to a rational agent when it is certainly one of the causes necessarily required to that happiness which he naturally, and consequently necessarily, desires" (V., xxvii., 4). This definition, we are informed in the same section, is based upon that given by Justinian: "Obligation is that bond of the law by which we are tied with the necessity of paying anything, according to the laws of our state". The narrowness of the Roman definition Cumberland criticises on the grounds that it is confined to the laws of a single nation and that it looks chiefly or solely to punishment. For him reward is the more important, and even more primitively effective element in the term. Removing from it then all accidental limitations, and carrying it up to the supreme legislator, the final account of the feeling of obligation is obtained as the sum of the motives for obedience to the rule of right derived from the rewards and punishments attached to human actions by God in creating man. Where the rules of reason are backed in this way by these sanctions they become "the laws of nature". But in reading this account it can not be too carefully noted that the obligatory is not for Cumberland, as it is for many later writers, identical in intension with the right. Unless the actions commanded by God had been antecedently right, God would not have been justified in demanding them (VII., vi., vii.; VIII., i., 2). In man, again, the knowledge of right and wrong is one thing; the egoistic considerations by which he may be induced to pursue the one and avoid the other, are another thing (V., xxxv., 8). The highest type of man, as has already been pointed out, needs no inducements

of this nature (see above, p. 381, and V., xlvii., 2). Indeed no action of ours really deserves the name of right except as our motive in performing it is identical in nature with God's motive in commanding us to do it (V., xlvii., 1). The place of obligation in the moral life is accordingly to be conceived as follows. In the process of development from childhood to manhood we begin with a narrow outlook. The happiness of self is what, at first, chiefly moves the will. To a mind thus constituted comes the discovery that its own interests are best attained by the service of one's fellow-men and of God. While obeying the call which thus comes to his ear the desire is born and grows for the realisation of these ends apart from any consideration of personal gain; not through any artificial process of association (as with many later writers), but through the awakening of a direct interest in other persons consequent upon a better acquaintance with and realisation of their nature and needs (V., xlv.). Thus obligation is merely a schoolmaster to bring us to the free service of the perfect man. If this seems to fail of agreement in any respect with the account given on pages 380 and 381 above, which is based primarily upon Book IV., chaps. i. and ii., we have no materials at our disposal by which to harmonise them.

We may now summarise Cumberland's position with regard to motives and values as follows. The good of self and the good of others are to be estimated in terms of pleasure. Each of these we desire directly. The desire for the maximum of personal good is found in every human being; the desire for the maximum good of others is more sporadic. While self-regard and benevolence are two distinct motives, in the sense that the second is not a mere modification of the first, the ends at which they aim prove to be entirely harmonious. Accordingly if you should inquire what we should do or what we ought to do if they were incompatible with each other, your question would be an idle one, like Lord Dundreary's famous question, If you had a brother would he like cheese? To the moralist of to-day, indeed, the problem thus left unsolved will appear an extremely important one, but our author was quite unconscious of its existence. Historically the first real attempt on the part of Rationalism to deal with it was the doctrine of authority originated by Butler and perfected by Price. If Cumberland himself had been asked as to the ultimate grounds of the equal authority of the regard for one's own good and the equal good of one's neighbour, I think he would have replied —if we may judge from the spirit of his system as a whole—

that while particular desires may and indeed must be evaluated according to the satisfaction afforded by their realisation, yet as between self and others there is no more reason why I should control my desires for my neighbour's happiness by what I expect to get out of it for myself than there is why (as is the case, in a certain fashion, in the Comtian scheme) I should evaluate the satisfaction of my own desires in terms of their value to others.

II.

The Influence of Cumberland upon Clarke and Shaftesbury.

The assertion has been made that Cumberland was one of the three or four most influential writers in the entire history of British ethics. Nevertheless it must be admitted that the moralists of the second generation after him, and also their successors, show either few or no traces of genuine, first-hand acquaintance with his thought. Undoubtedly they all read *De Legibus Naturæ*. But the reading seems to have been a superficial one. At all events it left little definite evidence of itself upon their pages. Cumberland's influence depends chiefly upon the fact that all the Eighteenth Century British moralists who wrote after the first decade of the century were profoundly influenced either by Clarke or by Shaftesbury, or oftentimes—as in the case of Butler—by both; and that the moral systems of these two men were in their turn based upon the writings of Cumberland to an extent which, apparently, has hitherto been scarcely suspected.

Evidence of the intimate dependence of Clarke upon Cumberland meets the eye upon the most cursory reading of the ethical works of the former. That portion of the Boyle Lectures which deals with ethics (being Sections I. and II. of a *Discourse Concerning the Unchangeable Obligations of Natural Religion*, etc.), contains about twenty-three thousand words. In this short space Cumberland is quoted twenty-two times, always with approval. No other writer of that century is quoted at all, except Hobbes and Spinoza, and these, of course, only to be refuted. A study of these quotations, however, gives a very inadequate conception of the indebtedness of the later to the earlier writer. To understand their relationship we must turn to a direct comparison of their views.

Clarke's summary of his own position does not, indeed,

particularly suggest Cumberland. He writes: "The same necessary and eternal different relations that different things bear one to another; and the same consequent fitness or unfitness of the application of different things or different relations, one to another; with regard to which the will of God always and necessarily does determine itself to choose to act only what is agreeable to justice, equity, goodness, and truth, in order to the welfare of the whole universe; ought likewise constantly to determine the wills of all subordinate rational beings, to govern all their actions by the same rules for the good of the public, in their respective stations. That is: these eternal and necessary differences of things make it fit and reasonable for creatures so to act" (*Discourse*, tenth edition, p. 28). Even here, however, we note a number of resemblances. The fit is interpreted, or at all events supplemented by, the reasonable, and the good of those affected is explicitly stated to be the end. Furthermore, the wrong is everywhere conceived of as the self-contradictory; moral distinctions are held to depend not upon the fiat of God but upon the nature of things; and the agency of innate ideas in the perception of moral (and intellectual) truth is denied. The precise relationship between the two authors, however, can best be made clear by an examination of the concrete "rules of righteousness," which together form, according to Clarke, the content of duty.

These rules are four in number, and are called the rules of piety, equity, benevolence, and sobriety, respectively. The fourth, which is the name given to the duty to self, does not call for special comment. In distinction from Cumberland, and in contradiction to his own point of view as expressed in other places (*e.g.* p. 75), duty to self is based upon the necessity of a wise self-regard as a means to the maintenance of the ability to obey the other moral laws (p. 60). Piety, as here conceived, also has no real analogue in Cumberland's system. It is described as congruity or fitness between "the exercise of God's several attributes" and "suitable returns of duty and honour from all his rational creatures throughout the universe" (p. 51). This fitness is "as plain and conspicuous as the shining of the sun at noon-day" (p. 52). Here the matter is left in the systematic discussion of the duty—except for an excursion into the realm of the æsthetic. But in another place (p. 40) we are informed that "he that wilfully refuses to honour and obey God . . . is really guilty of an equal absurdity and inconsistency in practice, as he that in speculation denies the effect to owe anything to its cause, or the whole to be bigger than its part". This is, obviously,

a desperate attempt to bring piety, as Clarke defines it, under the categories of Cumberland's system.

The fourth rule of conduct, then, has no point of contact with Cumberland's thinking; the first shows a departure from his spirit with an attempt to remain true to the letter. The second and third, on the other hand, are, in their formulation and mode of establishment, nothing but the creations of the older writer. The rule of justice reads in one of its several statements: "Whatever I judge reasonable or unreasonable for another to do for me, that by the same judgment I declare reasonable or unreasonable that I in the like case should do for him". "To deny this, either in word or action, is as if a man should contend that though two and three are equal to five, yet five are not equal to two and three." Thus "iniquity is the very same in action as falsity or contradiction in theory" (p. 54). Clarke is at first inclined to identify this law with the Golden Rule. But recognising quickly the impropriety of such a procedure, he points out that the measure of justice is not what "any unreasonable passion or private interest would prompt you, but what impartial reason would dictate to you to desire" (p. 55).

The third rule—that of benevolence—demands "a constant endeavouring to promote in general, to the utmost of our power, the welfare and happiness of all men". The obligation thus to act is established as follows: "If (as has been before proved)[1] there be a natural and necessary difference between good and evil, and that which is good is fit and reasonable, and that which is evil is unreasonable to be done, and that which is the greatest good is always the most fit and reasonable to be chosen: then . . . every rational creature ought . . . to do all the good it can to all its fellow-creatures" (p. 57).

The law of justice, as formulated above, is obviously a mere restatement of the following passages from *De Legibus Naturæ*. "Right reason in one cannot dictate that which contradicts right reason concerning the same things in any other person" (II., vii., 1); and again: "Whatever any one of these, from the dictates of right reason, wills should be done to himself or others, that do all, who are truly rational, will necessarily and always, so far as they come to the knowledge thereof" (V., xxx., 1). In both authors these statements appear as conclusions from the principle that the wrong is the self-contradictory.

[1] This refers to previous assertions that moral distinctions are objective, or as Clarke terms it, uneradicable.

That the deduction of the rule of benevolence is identical at most points with Cumberland's first proof that "the greatest good of all" is the moral end, will be evident to those who remember the presentation of this subject given in the preceding instalment. It is true that Clarke fails to introduce specifically the premise which gives Cumberland's argument against egoism its force, the principle, namely, that we are morally bound, in so far as we are at liberty to consider only our own interests, to choose a larger attainable good for self in preference to a smaller one. This fact, however, serves the more completely to exhibit Clarke's dependence upon Cumberland. He has copied an argument without apprehending clearly the foundation upon which it rests.

Clarke's ethical theories thus appear to have their source chiefly in the writings of Cumberland. If the study here attempted could have been supplemented by a minute examination of his language, this conclusion would have appeared still more convincing. That which has done most to obscure the fundamental identity of the two systems is the difference in the treatment of our duty to God. Clarke thought this ought to be placed upon a basis quite independent of our duty to our fellow-men. In working out the details he found some difficulty in bringing disobedience to this rule into the category of the self-contradictory. He therefore fell back upon the vague pair of terms, the fit and the unfit, placing the former by the side of the rational in the sense of that which is free from self-contradiction, presumably without asking himself very definitely precisely what the fit means. Apart from this he undoubtedly differs from Cumberland in some important respects. The chief ones are, the number of the fundamental rules of right and the entire treatment of the duty to self, which have already been referred to, the meaning attached to the word obligation, and probably the manner in which reason affects the will (*cf. op. cit.*, pp. 38 and 40 with above, p. 381)—though in this last matter it is very far from certain that he was conscious of the difference which appears to obtain between Cumberland's views and his own. After due allowance has been made for these divergences, however, we are still justified in asserting that the greater part of Clarke's ethical doctrine, as far as fundamentals are concerned, is simply a copy, in somewhat different formulation, of what he had read in the great treatise of the Bishop of Peterborough.

The relationship of Shaftesbury to Cumberland is a decidedly more complicated problem than that which we have just been studying. Shaftesbury is a far more independent

and vigorous thinker than Clarke. His answer to the fundamental question of ethics, the meaning of the word right, is a totally different one from that of Cumberland. And what he borrows,—if he does borrow,—he so thoroughly assimilates that its origin is not evident at first sight, and is in no one case really demonstrable. The evidence of dependence is to be sought rather in the *ensemble* of his views. The points of identity in the two systems are so numerous and occur under such conditions that the doctrine of chances seems to exclude the possibility of mere coincidence. The problem is further complicated by the familiarity of both authors with the works of the Greek moralists, and their unquestionable independent acquaintance with the fragmentary but suggestive ethical writings of Bacon and Grotius. On the other hand certain influences upon Shaftesbury can with great probability be excluded. The first edition of the *Inquiry concerning Virtue* appeared in 1699; the *Discourse concerning the Unalterable Obligations of Natural Religion*, in 1705. For this and other equally good reasons we are justified in believing that the writings of Clarke had no appreciable effect in shaping his views. A study of the Cambridge Platonists will exclude the idea of any important influence from that direction. The sources of Shaftesbury's ethics, in so far as they come from without, are to be found in the Greeks, possibly in some part in Bacon and Grotius, and, of other modern writers, principally or entirely in Cumberland. In view, however, of the complexity of the situation, the most that it is profitable to attempt to do is to present the common elements of the two systems, recognising, as we must, that we can probably never determine the exact amount of indebtedness of the younger to the older writer.

In the first place, then, their account of the content of the moral standard is almost the same. For Shaftesbury as for Cumberland human society is an organism, each member of which is dependent, through and through, either directly or indirectly, upon every other (Cumberland, II., xiv.; xxxi., 2; Shaftesbury, *Characteristics*, vol. II., p. 14 ff., being *Inquiry*, Book I., Part II., sec. 1[1]). The moral end is the greatest attainable good of the entire system. The individual is to pursue his own good so far and only in so far as it is compatible with this larger end, so that there are both a direct duty to self and a direct duty to others (II., 20-23; 90).

The good cannot be defined as the desired. This leads to

[1] Fifth edition, 1732.

contradictions, for the attainment of the desired is often followed by disillusionment (I., 318-325; II., 129, 149; III., 196-205). It is rather that "which can afford contentment and satisfaction always alike, without variation or diminution" (II., 237), or "that in which the nature of man is satisfied and can rest contented" (II., 436). Obviously Shaftesbury has not got beyond the realm of the desired in his definition of good, after all, since satisfaction involves desire. Doubtless he would have accepted some such definition as that offered by Sidgwick in the sixth edition of the *Methods of Ethics* (Book I., chap. ix.). At bottom, this was probably the position of Cumberland, though he had not formulated it very clearly in his own mind.

The conceptions of the two authors regarding the content of the good show certain differences rooted in fundamental identity. Cumberland, as will be remembered, looks upon the joys of virtue as the most valuable element in life, but he admits to the circle of the good the pleasures of sense and much else that Shaftesbury either ignores or repudiates. Shaftesbury holds, on the other hand, that there is no other good but the beautiful, of which virtue is one form (II., 422; *cf.* III., 30-34, 184, 185). Thus he appears at first sight to be antihedonistic. But the pleasure which he declares is not a good turns out to be a special kind of pleasure, that of sense, while, on the other hand, pain of all kind is declared to be, as such, an evil (II., 225-238). And, what is of more significance, it is the *enjoyment* of the beautiful that is the good, so that the latter is described in strictly hedonistic terms (as above, II., 422; *cf.* 237 ff.; III., 196-205; also *The Philosophical Regimen*, edited by Benjamin Rand, *Essay on Good*, and III., *passim*, especially p. 59).

The most important difference between Cumberland and Shaftesbury is in their account of the meaning of the term right. The great majority of moralists can be divided into two great schools with reference to their attitude towards this problem. On the one hand, there is Rationalism. The name describes the position: right means the rational. The other view must be called Idealism. For it, right conduct means that which tends to arouse a certain emotion—it may be either admiration or approbation; in other words, the moral judgment has its source in an ideal. This name, or an adequate substitute, will have to be adopted, even if it involves some shifting of nomenclature elsewhere, particularly in metaphysics. For our present systems of classification are a disgrace to ethics. Rationalism (or "Intuitionism") is usually regarded as the antithesis of Utilitarianism. But

our study of Cumberland must have shown, what should be obvious without it, that Rationalism and Utilitarianism are not mutually exclusive terms, and that for the simple reason that they are the products of different points of view. The latter represents one answer to the question, What actions are right? the former is an answer to the question What is meant by calling them right?

In his answer to the latter—the most fundamental of ethical problems—Cumberland, as we have seen, stands with the Rationalists. Shaftesbury, on the other hand, is an Idealist. For like the other members of the British "Moral Sense" school, specifically Hutcheson, Hume, and Adam Smith (for in his view of the nature of the ultimate basis of moral distinctions Adam Smith does not differ one whit from Hutcheson), he places the source of moral distinctions in the emotions. It is possible this statement may be denied, for is it not one of the commonplaces of ethical history that he regarded moral distinctions as having their origin in an "internal sense"? It is certain that he uses the term, sense of right and wrong, and even, on a few occasions, moral sense, in naming the source of the moral judgment (II., 40-46, especially in marginal analysis). But he also uses, in the same connexion, the terms heart, taste, reflexion, self-inspection, and, perhaps as frequently as anything else, reason. It is natural that a pupil, even an unorthodox pupil, of John Locke should use the term "internal sense" for any element of consciousness—or for the "faculty" which produces that element—which cannot be related with the organs of "external sensation". The question remains, however, what did he mean by it? The answer is a simple and definite one. The harmony which appears when the members of a society treat the welfare of each of their fellows and of themselves in such a way as to bring out the greatest attainable good for all—the harmony of this well-ordered system arouses the emotion of the beautiful. It is the apprehension of such a system and the admiration it evokes which give rise to the adjective right. Thus, as has been asserted, the ultimate source of moral distinctions is placed by Shaftesbury in the emotions. This is set forth with sufficient clearness in the following passages from the second volume of the *Characteristics*: p. 53, par. 2; p. 117, par. 3-119; p. 284, par. 3-291 (to be compared with pp. 14-22, *i.e. Inquiry concerning Virtue*, Book I., Part II., sec. 1); p. 75, par. 2; p. 294, par. 2. These will explain the better known, but somewhat vague passage in the *Inquiry*, Book I., Part II., sec. [illegible] (pp. 28-36).

What has all this to do with Cumberland? A great deal.

For it is precisely at this point where the divergence between the two men is greatest, that Cumberland's influence seems most clearly demonstrable. The ground of this statement is that Shaftesbury has incorporated into his Idealistic conception of right certain of the most characteristic features of Cumberland's Rationalism.

The most important of these is the doctrine that the moral judgment is the expression of something more than a mere subjective whim (I., 336-341, 350-355, II., 416-421; III., 164-185, 303). Great as is the amount of variation in human opinions as to what is right and wrong, some of them are entitled to the designation true, while the remainder must be called false. The conditions which a moral judgment must meet if it is properly to be called true are three in number. It must, in the first place, be—in the words of a later generation—the judgment of an "impartial spectator". In the second place it must be the judgment of one whose view includes the entire situation under consideration. Finally it must be the expression of a point of view which the person judging is willing to apply consistently to all similar cases. The first two of these conditions are mentioned only occasionally and in passing; it is probable that their full significance was not realised by Shaftesbury. It remained for Hume and Hutcheson respectively to show in detail their nature and the part they play in the formation of the moral judgment. The third condition, on the other hand, and the doctrine of objectivity which underlies them all, appear again and again, so that there can be no question of the importance of the place they occupied in his thought.

The first condition is stated in the following words: "In all disinterested cases [even the false or corrupt heart] must approve in some measure of what is natural and honest, and disapprove what is dishonest and corrupt" (II., 30; *cf.* 113). The fact that in the moral judgment we are looking, or believe we are looking, at the actions of human beings, both ourselves and others, not from the point of view of the accidental relation of these actions to our selfish interests, but in abstraction from these considerations, so that the moral ideal represents our ideal of action for humanity as such under the given conditions—this fact is one that finds frequent mention in *De Legibus Naturæ* (see above, p. 386).

The second condition which a judgment must meet if it is to be considered true is that the emotion which is at its source must be due to a complete view of the situation. Shaftesbury states this as follows: "Thus every immorality and enormity of life can only happen from a partial and

narrow view of happiness and good" (III., 304-305). The illustrations offered show that he had not grasped this principle in all its bearings. Like the preceding, it represents at best a detached glimpse of a truth of wide application and great significance. The nearest to an anticipation of it to be found in Cumberland is the following: "Only that measure of all our affections is consistent with the nature of a rational being and of the universe which exactly corresponds to the true valuation of those things good and evil by which they are excited" (VIII., xiii., 1). This, however, has more points of affinity with Shaftesbury's view than appears on the surface. There is here, also, a suggestion of Cumberland's doctrine of the cause of error in general, according to which it is always due to the feelings inciting the judgment "to determine points not sufficiently cleared up" (II., x., 1).

Finally a true moral judgment is the expression of an ideal that is free from inconsistencies. "We might then understand how to love and praise when we had acquired some consistent notion of what was laudable or lovely" (I., 41). Evil can never be reduced to self-consistency (III., 312). Sometimes inconsistency is described as exhibiting itself in our judgments with regard to our own good, the results of following the desire of the moment. It is also represented as appearing in the arbitrary choice of those whom we are willing to serve: "Partial affection, or social love in part, without regard to a complete society or whole, is in itself an inconsistency and implies an absolute contradiction. . . . If [our affection] . . . be applied only to some one part of society, or of a species, but not to the species or society itself, there can be no more account given of it than of the most odd, capricious, or humoursome passion which may arise. The person, therefore, who is conscious of this affection can be conscious of no merit or worth on the account of it. . . . It has no foundation or establishment in reason" (II., 110; the entire passage to page 114 should be consulted. *Cf.* also pp. 122-124). Such inconsistency, it is then argued, precisely after the manner of Cumberland, carries with it its own penalties.

When these conditions have been met Shaftesbury holds there will be universal agreement in the moral judgments of men, because the power of admiration for harmony and order exists in some degree in every human being (II., 43-44; III., 197 n., 303). It may indeed be more easily evoked in some persons than in others; it may be led astray by custom, education, false theological doctrines, and other causes. Nevertheless (apparently) it can never be entirely lost. And

every one who desires so to do may, by exertion, develop it in himself to its perfection (III., 186).

It will now be obvious why Shaftesbury assigns a leading *rôle* to reason in the production of the moral judgment. Emotions arise normally as a reaction upon the perception of a certain situation. The power to see a situation as it really exists is thus a *sine qua non* for a judgment that can lay any claim to future acceptance on our own part or to the acceptance of other people.

It is in this account of the meaning of the word right that the unique significance of Shaftesbury will be found to lie. He was the first to declare explicitly that moral distinctions have their source in the emotions. At the same time he caught glimpses, more or less detached, usually incomplete, but always accurate as far as they went, of the modes in which reason functions in the formation of the moral judgment. Furthermore he saw, with great, though doubtless not complete clearness, under what conditions Idealism can assert that notwithstanding the actual variations in moral judgments, there can be such a thing as a universally valid standard. If the emotional endowment at the root of the moral judgment exists, in whatever state of development, in every member of the race, then all the variations are due to irregularities in the working of the rational factor, and must therefore disappear with the correction of such irregularities. In working out his views it is possible that he did not always keep clearly in mind the great gulf which still separates his system from that of Rationalism. At all events he does not explicitly recognise that the adjective true must be applied to moral judgments in a sense different from that in which it is applied to the judgments of logic. The moral judgment does indeed claim to be based upon a perception of the situation as it actually is. But it claims more. It is, if Idealism be true, the expression of an ideal. And it claims that this ideal has been freed from all entanglement with purely personal ends, and that it forms in its entirety a self-consistent whole. Hence we should do better to speak of moral judgments as valid rather than as true. For validity means precisely this that a thing is what it gives itself out to be. But if Shaftesbury had seen every implication of his doctrine he would have done something that no other innovator in philosophy or in any other department of thought has ever succeeded in doing. What he actually accomplished was the work of a genius. He laid the foundations of one of the great types of ethical theory.

In his work of observation and thought it is impossible to

doubt that he was profoundly influenced by Cumberland. So that if Shaftesbury was saved from the subjectivism which, since the close of the eighteenth century, has accompanied most Idealism—in so far as Idealists have faced the problem at all,—we may attribute this fact in large measure to the writings of the Bishop of Peterborough.

There remains for consideration the doctrines of our two authors concerning the moral motive. These are as nearly in accord as the divergences above described will permit. Each is a Psychological Hedonist.[1] Each believes in the existence of a direct desire for the good of others. Among the egoistic motives for the service of our fellow-men each recognises joy in the possession of inner harmony and the love of the beautiful in character; although the second naturally plays a far more important *rôle* in the later system than in the earlier one. Again both authors believe that the true interests of egoism and altruism are in the end identical. Finally they agree in regarding the claims of egoism as having no primacy in any way over those of altruism.

This last statement contradicts the ordinary interpretation of Shaftesbury's system. It is commonly held that after having introduced the "natural affections," as he calls them, with much ceremony, and having assigned them a position of apparent equality by the side of the "self-affections," when he comes to the question, What reason is there for a man's serving his fellow-man? he abruptly turns his back upon them, and refuses to treat their interests as entitled to consideration in so far as they come into competition with those of their rivals. This view is an inference from the following fact. In the *Inquiry concerning Virtue*, after having discussed the nature of goodness and virtue and the effect upon them of religious belief, he writes: "It remains to inquire, what obligation there is to virtue, or what reason to embrace it?" (p. 77). The answer is given solely in terms of the pleasures of the agent. This is supposed to represent a lapse into Egoism. The conclusion is not flattering to the author's power of holding the thread of a comparatively simple train of thought. For, just before this, in his examination of the relation of the religious sanctions to genuine morality, he has declared in the most explicit terms that action for the benefit of others, undertaken with a view

[1] The evidence for Psychological Hedonism in Shaftesbury's system is far clearer and more complete than it is in the case of Cumberland. Sidgwick's conclusion (*History of Ethics*, p. 184, note) is obtained by arbitrarily choosing one of two possible interpretations of a single ambiguous passage, instead of accepting the interpretation which results from looking at it in the light of the whole to which it belongs.

to any form of personal reward, has no moral value whatever. Are we compelled to believe that he could have forgotten this assertion so soon? This depends entirely upon what he means by the term obligation. Let us suppose that it is used in Cumberland's sense of the word—as the sum of the motives arising from a view of the rewards in the way of personal happiness attached by nature, or nature's God, to the service of our fellow-men—let us make this entirely admissible supposition, and the difficulties vanish. Both authors are agreed that a belief in the ultimate harmony of the ends prescribed by egoism and altruism respectively is a great protection to a man under the strain of severe temptation. If the above explanation is correct, Shaftesbury is attempting to do no more than to prove that this belief is justifiable. The words, "What reason to embrace it?" suggest, indeed, something more than this, the position, namely, that the egoist can gradually transform himself into an unselfish man from purely egoistic motives. This may be good psychology, or bad. In any event all of us must admit that in proportion as men approximate in nature to absolute egoism they can be reached only by egoistic motives. Surely, then, there is nothing necessarily incompatible with a Universalistic theory in the attempt to appeal to those of lower moral endowment through the considerations to which they are most sensitive. It may well be that this class was included among those whom Shaftesbury had in mind at this point. Accordingly, taking all things into consideration, we seem justified in concluding that the question which has given so much trouble is simply an announcement of the subject-matter of the rest of the essay, which is the ancient and entirely respectable one as to the relation between virtue and individual happiness.

With Clarke and Shaftesbury, as has been said, the chief demonstrable influence of Cumberland upon British ethics ceases. But the indirect influence, through these two thinkers, was tremendous, extending to and informing all schools in all their branches, with the single exception of Egoistic Hedonism. The English Platonists seem to have affected the course of British ethics—if at all—only through Cumberland. So that, if the published and unpublished works of this group of men had been destroyed towards the close of the Seventeenth Century, we have every ground for believing that the history of the later Rationalism would not have been changed in any important respect.[1]

[1] It is tempting to find the influence of Cumberland in the ethical writings of Kant's critical period. But a careful study of the develop-

III.

Cumberland's Predecessors.

If we turn from Cumberland's successors to his predecessors we shall find that a very important part of what he gave the former was the product of his own mind. His account of the good, indeed, contains absolutely nothing new. But in his doctrine of the right there are original contributions of the highest value. Apart from some comparatively minor matters which we have not attempted to present they are found in two portions of the field. One is the doctrine of the standard. He is the first moralist who declares explicitly and in unambiguous terms that the essence of morality consists in the aim to bring about the greatest attainable amount of good for all those affected by the action; and, as a corollary, that the claims of self upon the agent are, in principle, neither greater nor less than those of any one else. The beginnings of this doctrine can be found in Bacon and Grotius, and indeed in the Greek moralists. But a comparison of Cumberland's teachings with the views of these men will show a definiteness and completeness of thought on his part for which we seek in vain among them, and which justify his claim to be considered the founder of Universalistic Utilitarianism. His second set of important contributions to ethics relates to the place of reason in the moral life. There was nothing new in the doctrine that moral distinctions are "objective," that they are independent of the will of God, and that they have their source in reason. But almost everything else in his account of the rational element in morality is original. Most Rationalists present as the content of the moral standard a miscellaneous mass of so-called intuitions whose relation to reason they make no serious attempt to exhibit. This statement is as true of Cumberland's predecessors, the Cambridge Platonists, as it is of the great majority of his successors. The founder of the Platonic School at Cambridge was Benjamin Whichcote. From his sermon The Glorious Evidence and Power of Divine Truth, we may infer that had he ever attempted a systematic presentation of his ethical views, the concrete

ment of Kant's thought in this field will lead to the conclusion that anything like direct borrowing is impossible to prove. While some relationship is not excluded by any facts in our possession, the chances are that Kant worked out his system of ethical Rationalism with no conscious dependence, at all events, upon the work of his great predecessor.

laws of action would have appeared as a series of more or less unrelated axioms. The same may be said of Nathanael Culverwel (see his *Discourse of the Light of Nature*, ch. VII.). More's *noemata moralia* are just such an agglomeration. Of Cudworth we can make no statement that is anything else than guesswork, for death cut him off before he had fairly begun his work in ethics. Cumberland, on the other hand, as we have seen, attempted to show that the moral code is due to the application of the fundamental principle of reason—that of contradiction—to the universal desires of men. In working out this conception he hit upon much that had hitherto remained unnoticed. He was the first to bring into the foreground the principle that the judgment of right is of such a nature that if it applies to one person it applies to every one else under the same conditions. He first recognised adequately the place of consistency in our moral judgments. It is true that the term consistency is constantly used in Stoic ethics. But it has a very different signification there from what it possesses for Cumberland. It is but a sign of unbroken firmness of will in the control of the emotions, instead of being an essentially logical category. Finally he made a unique use of the principle of consistency in the doctrine that the mind "is inconsistent with itself when it determines to act after one manner in relation to itself and after another manner in relation to others that partake of the same nature".

It is these rationalistic elements in Cumberland's system that most need to be brought to the attention of ethical students to-day. His account of the standard is familiar to every one. But his other teachings are all too frequently ignored. He doubtless erred in putting forward the universal validity of the moral judgment as an assumption. It should have appeared as a result rather than a postulate. But in laying down the principles stated in the preceding paragraph he pointed the way leading to the ultimate establishment of this conception. That what is right for one is right for every one else under the same conditions is, in a sense, a commonplace. Nevertheless its significance is not infrequently overlooked, especially by Idealists, though Hume has shown in detail what Shaftesbury suggested, its place in an Idealistic theory of ethics. Much the same might be said of the principle of consistency, except that here no follower of Shaftesbury has taken up the problem where he left it. It is true that Cumberland's identification of the inconsistent with the self-contradictory cannot be justified. To accept contradictories is to believe differently about the

same, while the pursuit of the inconsistent involves feeling and acting differently about the same; it is a building up with one hand and tearing down with the other. Nevertheless both conceptions have their source in that power of the mind which, without falling into faculty psychology, we may fairly term reason. And thus far it has been members of the Rationalistic school that have done most to emphasise their importance. The doctrine that the principle, Love thy neighbour *as* thyself, is the only consistent form which the moral ideal can take lay practically unnoticed through most of the Eighteenth and Nineteenth Centuries, until it finally found a tentative, hesitating acceptance on the part of Sidgwick (see *The Methods of Ethics*, Book IV., ch. II.). There are some moralists to-day, of whom the present writer is one, to whom this principle seems to be destined to supply the immovable foundation for that universally valid moral code whose very existence has for generations been a subject of controversy.

V.—DISCUSSIONS.

THE NATURE OF SENSE-DATA.

Mr. Bertrand Russell's little volume, *The Problems of Philosophy* (Home University Library, London, Williams & Norgate, 1912), will be read, as it deserves to be, by a wide circle of readers, —probably by a much larger number than any other philosophical book of recent years. For the work as a whole, I have no other feeling than that of sincere admiration. Mr. Russell has performed a difficult task with singular ability and success, and I know of no treatise better adapted to serve as an introduction to philosophical study or more calculated to stimulate reflexion upon the subjects with which it deals. Written in a style at once lucid and free from unnecessary technicalities, it resorts to none of the grosser means of winning popularity, and it is not unworthy of being placed alongside of Berkeley's *Principles* or of Hume's *Inquiry* as a sample of the way in which abstruse questions can be handled in the English language with genuine simplicity, conciseness and scientific exactitude.

The author has confined himself in the main to "those problems of philosophy in regard to which it seemed possible to say something positive and constructive". What he offers is, in fact, a theory of knowledge, worked out with much originality and independence of treatment. Sometimes, it is true, his interpretation of historical theories is open to question. I doubt, for instance, the justice of the charge against Berkeley of confusing the thing apprehended with the act of apprehension (p. 65), in view of the very emphatic distinction insisted upon in the *Principles* (§ 49), and I cannot understand how Kant can be represented as calling the physical object (in any sense of the term) the "thing-in-itself" (p. 134). But, as a rule, such criticism as the book contains is extremely suggestive and helpful. I propose here, however, to direct attention to one topic alone. In the earlier chapters, there is presented, as clearly and forcibly as could be presented, a view of sense-apprehension which seems to me untenable, and I think Mr. Russell's exposition indicates unmistakably where the essential points at issue lie. The following discussion is designed to bring these to light.

Emphasising the importance of distinguishing the act of awareness from that of which there is awareness, Mr. Russell determines,

in the case of sense-experience, to speak of the former as "sensation" and of the latter as "sense-datum". The sense-datum is, in his view, an entity distinct and separate on the one hand from the act of apprehension and on the other hand from the real or physical object. The existence of the sense-datum is not necessarily, he thinks, mental; it may be due merely to the relation of our sense organs to the physical object. But even though it be not mental, the sense-datum as an appearance must, I gather, depend upon the act of sensation, although I cannot find that the nature of the dependence is anywhere explained. The sense-organs stand, of course, in relation to a variety of physical objects other than that of which for the time being the subject is aware. Whilst I am gazing at the inkstand in front of me, rays from a number of other objects in the room affect the organ of vision, and it is difficult to say why, according to the theory, these latter should not give rise to sense-data, even though I am conscious only of the inkstand.

It is admitted (*a*) that in ordinary common-sense experience it is instinctively believed, at any rate in the case of sight, that sense-data are properties of the physical object, and (*b*) that there can never be reason for rejecting any instinctive belief except that it clashes with other instinctive beliefs. If, then, the instinctive belief that sense-data are properties of physical objects calls to be rejected, it has to be shown that it clashes with other instinctive beliefs, and I take it, that *its* rejection is more reasonable than the rejection of the other instinctive beliefs in question would be. How then, does Mr. Russell endeavour to comply with the requirements of the rule thus prescribed?

He relies for the establishment of his thesis upon the distinction between appearance and reality, between what things seem to be and what they are. I am not, of course, going to dispute the legitimacy of this distinction. Everything, however, depends upon the interpretation which is to be put upon it, and I shall try to show that Mr. Russell does not adhere consistently to one interpretation. First, however, let us see what the distinction itself is made to yield.

A concrete example is taken,—that, namely, of a table of a certain shape, with sheets of paper upon it, and before which the writer is sitting. Our problem concerns the sense qualities which the table seems to possess.

It will be sufficient to consider its colour. Evidently, so the contention runs, there is no one colour which pre-eminently appears to be *the* colour of the table, or even of any one particular part of it. The table appears to be of different colours from different points of view, and there is no reason for regarding one of these colours as more really its colour than the others. Further, even from a given point of view the colour will seem different by artificial light, or to a colour-blind man, or to a man wearing blue spectacles, while in

the dark there will be no colour at all, though to touch and hearing the table will be unchanged. Therefore, colour is not something which is inherent in the table, but something depending upon the table and the spectator and the way in which the light falls on the table. We have here, I venture to submit, an example of the fallacy of *non sequitur*. Suppose, for the sake of argument, that colour *is* inherent in the table, suppose the table has in reality a specific colour. Then, surely, there would be nothing to conflict with this supposition in the fact that such real colour will present a different aspect if another colour be reflected upon it, or if a blue pair of spectacles intervene between it and the observer, or if it be enveloped in darkness rather than in daylight. The reasoning would only be valid on the assumption that if the table is really coloured, the real colour *must* appear the same in darkness and in daylight, through a pair of blue spectacles and without them, in artificial light and in the sun's light,—an assumption extremely improbable, to say the least of it, and for which there is absolutely no warrant. And so, again, with reference to colour-blindness. Supposing that the table really is brown, and that by normal vision it is apprehended as brown, there is nothing extraordinary in the fact that it should appear different to the man whose vision is not normal. The extraordinary thing would be if it did not. If *normal* vision is the way in which the real colours of objects are more or less accurately apprehended, is it not a strange demand to make that *abnormal* vision must also likewise be a way of more or less accurately apprehending them? But, argues Mr. Russell, the colours seen by abnormal vision have just as good a right to be considered real as those seen by normal vision; and, therefore, to avoid favouritism we are compelled to deny that in itself the table has any one particular colour at all. We should be reasoning in an analogous way, were we to argue that if 2 + 2 seem to a madman to be equal to 5, this has just as good a right to be considered the real sum of 2 + 2 as the 4 which people of normal intellects take to be the sum, and, therefore, to avoid favouritism, we are compelled to deny that, in itself, 2 + 2 has any one particular sum at all. Moreover, it is to be observed that this is not the way Mr. Russell argues when he is dealing with the *shape* of the table. If the opposite sides of the table are really of equal length, they will look as if the nearer side were longer; if they are really parallel, they will look as if they converged to a point away from the spectator, and so on. All these things, it is pointed out, are not commonly noticed, in looking at the table, because experience has taught us to construct the "real" shape from the apparent shape, and the "real" shape is what interests us as practical men. The table, then, has a real shape, even though from most points of view its shape will look different from its real shape. Why, then, should it not have a real colour, even though from some points of view the colour it seems to have will be different from such real colour?

I have said that Mr. Russell does not seem to me to adhere consistently to one interpretation of the distinction between appearance and reality. I have now to indicate why I think so.

There are, roughly speaking, two senses in which the nature of an "appearance" as distinguished from a "reality" may be construed. On the one hand, an appearance may be regarded as a way in which the reality is apprehended—as, in the case of a finite mind, a partial, imperfect, incomplete way in which the reality is known. So regarded, appearances will not have ascribed to them a mode of existence independent of, and separate from, the reality of which they are appearances. An appearance will not be looked upon as a *tertium quid* situate between the apprehending subject and the real thing or event apprehended by the said subject; it will be looked upon as a way in which the real thing or event is known, a way in which knowledge of the real thing or event is had. And it will be recognised that this very nature precludes us from conceiving of the appearance as belonging to the *ordo existendi*. To say that "we only know appearances" will be, accordingly, an inaccurate mode of speech. All that, in strictness, we should be entitled to say would be that we know things, but that we know them only in and through their appearances. The latter clause would be simply a repetition of the former, for both would have the same meaning. To know a thing would be to know it in and through its appearances. To contrast, then, the appearances of a thing with the thing as it does not appear will be an illegitimate procedure; the thing as it does not appear would be as little the real thing as the appearances abstracted from the thing would be the real thing. On the other hand, an appearance may be regarded as itself an existent entity—an entity that arises in some way through the operation of the real thing upon the mind, or, if it be preferred, produced through the operation of activities occasioned by the real thing upon the nervous mechanism of the individual subject. In that case, the appearances, conceived as distinct and separate from the reality, will be taken themselves to constitute a thing, and it will be *this* thing and not the real thing that will be held to be immediately known. The produced thing will thus be regarded as standing between the knower and the real thing, and thus the doubt will inevitably be awakened whether after all we are entitled to assume the existence of a real thing, which *ex hypothesi* can only be mediately inferred and never directly known. There will be, as Mr. Russell says, "no logical impossibility in the supposition that the whole of life is a dream, in which we ourselves create all the objects that come before us" (p. 35).

There is evidence in the work before us to justify the surmise that Mr. Russell is oscillating between these two radically different conceptions of the nature of appearances. He does not, that is to say, definitely face the issue whether it is the real things themselves that appear, or whether it is the appearances that appear. We find

him making in this respect irreconcilable assertions. For example, he maintains (pp. 23 and 24) that, in regard to the table "what we directly see and feel is merely 'appearance,' which we believe to be a sign of some 'reality' behind". "The reality," he goes on, "is not what appears," and consequently the question is forced upon us, whether we have any means of knowing that there is any reality at all. So, again, it is declared (p. 16), that "the real table, if there is one, is not the same as what we immediately experience by sight or touch or hearing". In other words, what is seen or touched or heard is not the real table as a physical object, but a complex of sense-data, which make up the apparent object. The latter is the private property of the individual experiencing; the former, if it exist at all, is the public property of a number of experiencing individuals. "Thus," we are told (p. 32), "if there are to be public neutral objects, which can be in some sense known to many different people, there must be something over and above the private and particular sense-data *which appear* to various people." Did these, and other assertions to a like effect, stand alone, we should inevitably interpret them as meaning that it was the sense-data, that is to say, the appearances, which appear, and not the physical object. But they do not stand alone. Mr. Russell is constantly, on the other hand, using phrases which can only mean that it is the physical object which appears, and that the sense-data are appearances *of* the physical object. For example, he writes (pp. 31 and 32) "when ten people are sitting round a dinner-table, it seems preposterous to maintain that they are not *seeing* the same tablecloth, the same knives and forks and spoons and glasses". So, again (p. 46) he tells us that "different people *see* the *same* object as of different shapes, according to their point of view". And once more, our knowledge, such as it is, of the table as a physical object is said (p. 74) to be "obtained through acquaintance with the sense-data that make up the appearance of the table". Did these, and other assertions to a like effect, stand alone, we should inevitably interpret them as meaning that it was the physical object which appears and is known through the appearances. This is not merely a verbal quibble; the difference between the two conceptions is crucial in respect to the question here at issue. It is one thing to say that we can only know things as they appear to us; it is quite another thing to say that we cannot know the things themselves but only their appearances. If the former is all Mr. Russell means, then his argument in favour of the proposition that it is quite gratuitous to suppose physical objects to have sensible qualities falls to the ground. If the latter is what he means, then he is face to face with the curious paradox that the things themselves do not appear at all, that it is only the enigmatical entities erroneously called *their* appearances which appear, and the question would at once arise whether these appearances do not require to be represented by yet other appearances, and so on *ad infinitum*.

I think a similar confusion is to be discerned in the distinction Mr. Russell makes between real and apparent space. The space of science, he argues, though connected with the spaces we see and feel is not identical with them. In the first place, space as we see it is not the same as the space we get cognisance of by the sense of touch; it is only by experience that we learn to connect tactual and visual space. But the space of science must be neutral as between touch and sight; it cannot, therefore, be either the one or the other. In the second place, real space is public, apparent space is private to the percipient. And in different people's *private* spaces the same object seems to have different shapes; the real space in which the object has its real shape, must, therefore, be different from the private spaces. But, here, again, one asks,—Are the so-called tactual and visual spaces different entities from the real space, or are they different ways in which the real space is apprehended? The whole drift of the argument would seem to imply that Mr. Russell regards them as different entities. And, in that case, one is led at once to inquire how the being of these apparent spaces is consistent with the account that has been given of the nature of sense-data. As we have seen, Mr. Russell will not allow that his argument about sense-data proves them to be in any sense mental. The existence of the brown colour ascribed to the table depends, for example, upon the causal relation of the physical object, in this case the table, to the visual organ. Would he, then, explain the origin of visual space in the same way? Is it also non-mental? And does it in like manner arise through the causal action of real or physical space upon the sense organ? The difficulties involved in such a supposition are, I take it, obvious. It is true Mr. Russell tells us that we can know nothing of what physical or real space is like in itself; "the kind of things which a man born blind could never know about the space of sight we also cannot know about physical space" (p. 30). But if we are required to assume that physical space in some way causes the apparent spaces which we do know, then certainly we are ascribing to the former a positive characteristic of a quite peculiar kind and it will not do to justify our procedure by falling back upon our ignorance. We should be bound, at least, to ask whether that characteristic is consistent with the assumptions we are required by science to make in regard to real space.

I pass to another aspect of the question. I have alluded to the distinction Mr. Russell draws between "sensation" and "sense-data". The latter are "the things that are immediately known in sensation," the former is the act of awareness itself. Unfortunately he does not always himself adhere to this distinction, and on that account, in regard to the criticism I am going to urge, there is some amount of uncertainty. For example, it is said (p. 16) "the various sensations due to various pressures on various parts of the body cannot be supposed to reveal *directly* any definite pro-

perty of the table, but at most to be *signs* of some property which perhaps *causes* all the sensations, but is not actually apparent in any of them". Evidently here the term "sensations" indicates what are elsewhere called "sense-data". So, again, he writes (pp. 30 and 31), "when we have enumerated all the sensations which we should naturally regard as connected with the table, have we said all there is to say about the table, or is there still something else—something not a sensation, something which persists when we go out of the room?" Clearly, here also for "sensations" and "sensation" one should read "sense-data" and "sense-datum" respectively. But, now, keeping to the distinction upon which Mr. Russell insists, and remembering that the distinction implies for him separation, I raise the following query. Does Mr. Russell mean that the physical object causes both the "sense-datum" *and* the "sensation" or is it the cause of the sense-datum only? From numerous passages, I should gather that Mr. Russell would answer that it is the cause of both. For example, he speaks (p. 35) of real objects, "whose action on us causes our sensations". So again (p. 45), after saying that light is "something caused by the action of certain waves upon the eyes and nerves and brain of the person who sees the light," he talks of the waves as "the physical cause of our sensations of light". It is not, of course, impossible that one and the same cause may give rise to two separate and distinct effects, that, for instance, the stimulus, acting on "the eyes and nerves and brain" of a person, may first occasion the sense-datum which we call a brown colour, and then, acting on the mind of the said person, may produce the sensation, or act of apprehension, in and through which there is awareness of the brown colour. Only, in that case, it is important to recognise that the two operations *are* quite separate and distinct. And the question will have to be faced,—How is the sense-datum related to the sensation? The sense-datum is not itself the cause, as has sometimes been assumed, of the act by which it is apprehended. How, then, is it related to that act? Mr. Russell presumably would reply, it is related as the object known to the process of knowing. Very well; but if a mental act can stand in immediate relation to a sense-datum other than itself, and existing apart from itself, why is it disqualified for standing in a similar relation of immediacy to the physical thing? In reference to both the same claim might be made. Neither is "in" the mind; each stands "before" the mind in the position of an object (*cf.* p. 67). What is it that renders possible immediacy of relationship in the one case and precludes it in the other? Why should an object that comes about as an effect of an operation on the sense-organs be placed in an advantage, so far as knowability is concerned, to an object that exists independently of such operation? Mr. Russell has deprived himself from having recourse to the argument based on the "given" character of the sense-datum. So far as the act of

apprehending is concerned, the sense-datum is "given" in no way in which the real object is not "given". And it would be difficult, I imagine, to discover any other factor to account for the significant difference in question. All, apparently, that could be said would be that the difference is there, and has simply to be accepted.

In view of the consideration just dwelt upon, I do not see how the contention that our knowledge of sense-data is infallible and possesses immunity from error can for one moment be sustained. It is true that when there is *awareness* of a sense-quality there cannot in and through the same act of awareness be doubt of that *awareness*. But the immunity from doubt appertains to the awareness, not to the object of which there is awareness. If the sense-datum exists as an effect of something upon the sense-organs, there is no guarantee whatsoever that it will be apprehended in and through the act of sensation precisely as it exists *in rerum natura*. In short, there is no *a priori* reason why this appearance should appear precisely as it is. In point of fact, there is very strong reason for saying that, according to Mr. Russell's account, the sense-datum appears very different from what it is. For admittedly, as apprehended, the sense-data appear to be properties or qualities of the real object, whereas, according to the theory, they are nothing of the kind. What we are immediately aware of is really an *effect* due to an operation upon the sense-organs; what we seem to be immediately aware of is a property or quality of the assumed *cause*. Sensation, therefore, would appear to be under the ban of a perpetual hallucination. And Mr. Russell makes no serious attempt to explain how this extraordinary hallucination comes about. Apparently, he would account for it as an inference—an erroneous inference—on the part of the subject. But if it be an inference, it is certainly an unconscious inference. No sensuously apprehending mind is aware of going through a process of inference in such a case. And in reference to that, I think we are entitled to ask two things. In the first place, assuming it to be an inference, we need to be told on what grounds the unconscious inference comes to be made, and why the result of such inference should seem to us to be not mediately but immediately known. In the second place, we need to be told why we should assume it to be the result of an inference at all, seeing that, *ex hypothesi*, our only criterion of immediateness is what we seem directly to apprehend, and that, according to that criterion, the awareness of the sense-datum *as a quality of the real object* is no less immediate than the awareness of the nature of the sense-datum itself.

I turn lastly to what seems to me to be the root error of the theory I have been criticising. The distinction between the act of apprehension and the sense quality apprehended, between what Mr. Russell calls the "sensation" and the "sense-datum," seems to me a perfectly legitimate and an important distinction. But we are not, I think, entitled to take that distinction as indicating three

separate and independent existences. The sense-datum as a content of the act of sensation is not a *tertium quid* between the real thing and the mind; it is that which in and through the act of sensation is apprehended of the real thing. In other words, I submit that Mr. Russell has shown no ground for the contention that the sense quality comes into existence through the operation of the physical object upon the organs of sense. That would imply, were it a fact, that the organs of sense instead of being instruments for acquiring knowledge of the real world were, on the contrary, instruments that stood in the way of acquiring such knowledge, and in truth rendered such knowledge for ever impossible. No instinctive belief is so strong as the belief that by means of the sense organs we do attain knowledge of real things, and according to Mr. Russell's own canon (p. 39) the most conclusive reasons would be needed for holding that belief to be false. No such reasons have been presented. All that the facts adduced warrant us in saying is that the *acts of sensation* arise in consequence of the stimulation of the sense-organ; they do not warrant us in saying that the *qualities apprehended* arise in like manner in consequence of such stimulation. Or, to bring out the issue in yet another way, I should dispute the legitimacy of the distinction, as Mr. Russell draws it, between what he calls "knowledge by acquaintance" and "knowledge by description". "We have *acquaintance* with anything," he tells us, "of which we are directly aware, without the intermediary of any process of inference or any knowledge of truths. Thus in the presence of my table I am acquainted with the sense-data that make up the appearance of my table—its colour, shape, hardness, smoothness, etc." On the other hand, "the particular shade of colour that I am seeing may have many things said about it—I may say that it is brown, that it is rather dark, and so on". Such knowledge is knowledge by *description*. Through it I may know truths *about* the colour, but I do not know the colour itself any better than I did before (p. 73). It is difficult in a few words to make quite clear the confusion which I believe to be here involved. I do not question that we may have direct and immediate knowledge of facts, in which little or no inference seems to be involved, although I should say that what is thus direct and immediate for the mature mind may not, and certainly would not, have been so for the rudimentary mind. I do not question either that a fundamental distinction is to be drawn between "a thing" and "the truths about a thing," although I do not think this distinction is forthwith to be translated into the form "knowledge of the thing" and "knowledge of the truths about the thing". I do not question once more the importance of distinguishing between what *exists*, meaning by *existence* occupying a position in time, and what *subsists* or *has being*, where being is opposed to "existence" as being timeless, but so far as concerns what falls under the one head or the other, I cannot accept Mr. Russell's line of demarcation. We are considering at present sense-data, and

I confine attention to them. "There is," says Mr. Russell, "no state of mind in which we are directly aware of the table; all our knowledge of the table is really knowledge of *truths*, and the actual thing which is the table is not, strictly speaking, known to us at all." Our knowledge of the table, such as it is, is obtained through acquaintance with the sense-data that make up the appearance of the table; we *describe* the table by means of the sense-data (pp. 74 and 75). Now, if what I have been urging with reference to appearance be granted, we are entitled, on the contrary, to say that there are states of mind in which we are directly aware of the table, and that though we may proceed to *describe* the table by means of the sense-data, this does not mean that there was first awareness of the sense-data as distinct from the table, and that our ascription of them later to the latter is only an illegitimate inference on our part. The truth would rather be the following. Our direct, immediate awareness is originally a comparatively confused and indistinct awareness of the real thing. By degrees we come to discriminate the various sense qualities of a thing from one another, and from the thing. We may then, by abstraction of our own, hold, so to speak, one quality before the mind apart from the others. We may, for example, single out the brown colour of the table, and disregard its hardness. But when we do this, we are not entitled to ascribe *existence* to the brown colour, as thus separated and abstracted from the real object of which it is a quality. We can then only say of it, just what Mr. Russell says of universals, that it subsists or has being, as contrasted with existence. And I think for precisely the same reason which he gives for refusing to speak of universals as existing. The brown colour, as thus separated and abstracted from the real object of which it is a quality, as thus held apart in the act of awareness, is independent of time and change, is, in other words, timeless. Equally with a universal, it may be said to have perpetual, rigid, and unchangeable being. Nothing can alter it, for the simple reason that it is not an existing fact to be operated upon, acted on, or affected in any way.[1] Undoubtedly the act of apprehending it is dependent upon temporal conditions and is in time, and so, too, of course, for the matter of that, is the act of thought, by which a universal is apprehended. But the abstracted brown colour differs not at all, as regards timelessness, from the universal. That is to say, knowledge is all of one piece, and if we distinguish knowledge from what is known, we are not entitled to cut the former in two with a hatchet, denoting some of its contents as temporal and others as timeless.

Yet a further consideration may assist in rendering my meaning clear. Mr. Russell insists upon instituting a very sharp and pronounced antithesis between what he calls "perception" and "judg-

[1] *Cf.* Lotze, *Metaphysik*, § 24.—"The predicates of things are unchangeable. They vary indeed in their applicability to things, but each of them remains eternally the same with itself. It is only the things that change, as they admit of and reject now one predicate, now another."

ment". If, for example, we first apprehend the sun shining, we are said to perceive directly this complex fact. If, however, we pass from such "given complex fact" to the judgment "the sun is shining," we have had, it is contended, to perform an act of analysis; we have had to separate out "the sun" and "shining" as constituents of the fact. And in this process of analysis it is possible that an error may be committed; we cannot be deceived in the perception of the complex fact "the sun shining," but we may be deceived in forming the judgment that "the sun is shining". And the difference is due to the presence of analysis in the latter case and its absence in the former (p. 214). I cannot admit that the distinction, as thus drawn, is well grounded. Perception of such a complex fact as the sun shining would be clearly and obviously, I should say, impossible without a process of discrimination, involving analysis the same in kind as, though no doubt differing in specific ways from, the analysis involved in making the judgment "the sun is shining". The shining sun is selected from a large mass of other sense-data, and distinguished from them, and were it not so distinguished there could be no such perception of it as is here assumed. It is not given simply as a detached, separate, isolated whole; as a fact of perception, it has had, in and through the act of awareness, to be detached and separated. I should go further and maintain that not even the crudest apprehension of a sense-datum can be accounted for as a phase of mind except it be viewed as a process of discriminating and comparing,—a process which, whilst differing, of course, vastly in degree of completeness from those acts which we specifically describe as acts of comparing and relating, as judgments, is yet in kind identical with them. What Mr. Russell calls perception is, that is to say, from the beginning in essence an act of judgment, although no doubt the term judgment, as ordinarily understood, indicates far too developed a form of the one common process to be rashly employed in speaking of the earlier and more rudimentary stages.

G. Dawes Hicks.

EULER'S CIRCLES AND ADJACENT SPACE.

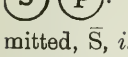
"It might well seem that the task of representing by a diagram the mental act of judgment, necessarily involved an impossibility. Take, for instance, a simple proposition such as 'The orange is round'. How, it may be asked, can there be any *material* representation of so essentially a *psychical* act as the abstraction of 'roundness' from the concrete object? Or how can any *figure* express a universal *concept?*" (Joyce, *Principles of Logic*, p. 77. Italics mine).

Euler's diagrams involve the assumption that the relations of terms may be adequately represented by their extension alone as presented to the eye by lines and spaces on a flat field. A bold assumption! Flat spaces constitute a very inadequate presentment of the intricate relations of logical terms, each of which is rounded up into a subtile complex of qualities as well as quantity. However, if we limit ourselves to the inside of the simplest diagrams, as Euler himself did, the method has some merit, though it tends to foster mechanical habits of mind. It becomes distinctly mischievous if we proceed to annex the space around the circles and draw conclusions on the assumption that the contradictory of the term in the circle is identical with outside space in its extent and in its relations to other terms and their contradictories. Modern logicians are too prone to indulge this vicious mechanical habit of confusing logical relations with space relations. That outside space is an untamed jungle full of logical pitfalls. Conclusions drawn from it are worthless, unless independently confirmed. The soundness of this contention is best shown by a careful examination of the several forms of inference by inversion as related to Euler's circles.

Logicians differ as to the representation of propositions, I, for instance, varying from one figure to four figures. Joyce, who, in spite of difficulties so strongly expressed in the quotation above, considers diagrams "in many respects helpful," gives one figure for E and two for each of the other propositions. For our present purpose it will be convenient to follow him.

Accepting at present, for the sake of argument, the assumption that conclusions may be read off from the space outside of the circles, let us see how many inverses we can get by this method.

An E proposition, No S is P, is represented by Fig. 1,

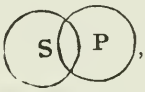


. On the fundamental assumption provisionally admitted, $\bar{S}$, *i.e.*, the space outside the circle on the left, co-incides in part with P and in part with $\bar{P}$. Hence we may read off at a glance two inverses, $\bar{S}\,i\,P$ and $\bar{S}\,i\,\bar{P}$. The second of these, Some $\bar{S}$ is P, may just as well be read Some $\bar{S}$ is not P; and the first, Some $\bar{S}$ is $\bar{P}$, may also be read Some $\bar{S}$ is not P. E then yields four inverses, $\bar{S}\,i\,P$, $\bar{S}\,i\,\bar{P}$, $S\,o\,P$, and $\bar{S}\,o\,\bar{P}$.

A is represented by Fig 2,

, and Fig. 3,

. In Fig. 3, as in Fig. 1, $\bar{S}$ co-incides in part with both P and $\bar{P}$. Hence we read off the same four inverses as from E. Fig. 2 yields two more, $\bar{S}\,a\,\bar{P}$ and $\bar{S}\,e\,P$, since the spaces outside of two co-inciding circles also co-incide. Thus we have in all six inverses of A, $\bar{S}\,i\,P$, $\bar{S}\,i\,\bar{P}$, $\bar{S}\,o\,P$, $\bar{S}\,o\,P$, $\bar{S}\,a\,\bar{P}$, and $\bar{S}\,e\,P$. The subalterns, $\bar{S}\,i\,\bar{P}$ and $\bar{S}\,o\,P$, may also be read off from Fig. 2, but since they are already in the list as read off from Fig. 3 they are not repeated.

O is represented by Fig. 4, 

, and Fig. 5,

. (For one meaning of *Some*, Fig. 1 also may represent O. Since it gives the same inverses as Fig. 4, it is not required here.) From Fig. 4, as from Figs. 1 and 3, we read off for O the same four inverses as the first four for E and A. From Fig. 5, since all of the space outside of S is also outside of P, we read off $\bar{S}\,a\,\bar{P}$ and $\bar{S}\,e\,P$. Again, as in the case of A, the subalterns are not counted. O yields in all six inverses, the same as the six derived from A, *viz.*: $\bar{S}\,i\,P$, $\bar{S}\,i\,\bar{P}$, $\bar{S}\,o\,P$, $\bar{S}\,o\,\bar{P}$, $\bar{S}\,a\,\bar{P}$, and $\bar{S}\,e\,P$.

I is represented by Figs. 4 and 5, the same as O, and yields the same six inverses. Two more figures for I are sometimes added, but these add nothing to the list of inverses.

The following table exhibits our results in a compact form:—

Inverses Read Off from the Outside of Euler's Circles.

From A	$\bar{S}\,i\,P$, $\bar{S}\,i\,\bar{P}$, $\bar{S}\,o\,P$, $\bar{S}\,o\,\bar{P}$, $\bar{S}\,a\,\bar{P}$, $\bar{S}\,e\,P$	6
,, E	$\bar{S}\,i\,P$, $\bar{S}\,i\,\bar{P}$, $\bar{S}\,o\,P$, $\bar{S}\,o\,\bar{P}$	4
,, I	$\bar{S}\,i\,P$, $\bar{S}\,i\,\bar{P}$, $\bar{S}\,o\,P$, $\bar{S}\,o\,\bar{P}$, $\bar{S}\,a\,\bar{P}$, $\bar{S}\,e\,P$	6
,, O	$\bar{S}\,i\,P$, $\bar{S}\,i\,\bar{P}$, $\bar{S}\,o\,P$, $\bar{S}\,o\,\bar{P}$, $\bar{S}\,a\,\bar{P}$, $\bar{S}\,e\,P$	6
	Total - - - -	22

These are all properly reckoned as distinct. Inverses having the same formula but derived from different propositions, are very far from being identical inferences. $\overline{S}\ o\ P$ as inferred from A, for instance, is wholly different, as regards the reasoning involved and its claim to validity, from $\overline{S}\ o\ P$ as derived from O. Inversionists accept the former and reject the latter. $\overline{S}\ o\ P$ from E, or from I, in like manner, differs from the same conclusion from A or O. $\overline{S}\ o\ P$ must therefore be counted in each line, or as often as it appears in the table. Every line of the table makes its separate contribution to the total, notwithstanding identity of formulas in vertical columns. The total is startling—22 distinct inverses! The text-books give only four. But from Euler's circles they rattle out like dry peas from the pod. Particular propositions are especially prolific.

Are they all valid? Not one. $\overline{S}$ is an illicit minor term. Its content is not represented at all in the premiss, be that either A, E, I or O. Ordinary illicit process infers the whole when only a part is given. The content of the illicit term is present in the premiss, though not in full measure. How much more gross is the illicit process of inversion! It admits in the conclusion a term of which not even a part is contained in the premiss. Inversionists seem to regard S and $\overline{S}$ as if they were tied together by some magic bond by virtue of which one may be inferred from the other. As a matter of fact they are wider apart than A and Z. The latter are merely different; the former are contradictory. As subject-matter of discourse S and $\overline{S}$ have absolutely nothing in common. If A is in the premiss do we therefore proceed to write Z in the conclusion? We might do so more reasonably than to infer $\overline{S}$ from S. The original subject, S, in the inference $S\ a\ P \therefore \overline{S}\ o\ P$, sounds the keynote of the argument, and when you say $\overline{S}$ in the conclusion you bring in discord. You are talking about something else, singing out of tune. Changing subjects breaks the bond of inference. It vitiates the eduction series, $S\ e\ P \therefore P\ e\ S \therefore P\ a\ \overline{S} \therefore \overline{S}\ i\ P$, which is the mainstay of inversion. The whole series harks back to the original subject, S, and the new subject in the final term, $\overline{S}\ i\ P$, brings in alien matter of discourse. It is therefore illicit as related to the first term, $S\ e\ P$, notwithstanding the fact that it would follow properly from $P\ a\ \overline{S}$ if that were an independent proposition instead of standing in a series beginning with $S\ e\ P$. The *predicate-term* may be safely negatived in obversion if we change the quality of the proposition, but negating the *subject* throws the whole inference out of gear so completely that changing the quality gives only a specious illusion of restoring the balance.[1] A series of

[1] The predicate is dual (copula + predicate-term) and changing one part is balanced by changing the other. But the subject being single, any change in it is unbalanced.

alternating obversions and conversions is valid only so long as the integrity of the original subject is preserved. Negating the original subject severs the inferential tie between the first member of the series and the last member. If the original subject is S, then $\overline{S}$ brought into the series as a new subject, is a mischievous intruder. Hence every possible inverse is illicit. Be there one, or four, or one hundred, every inference from S to $\overline{S}$ is a fallacy.

Even the most ardent advocate of inversion is not willing to stand sponsor for more than four of the twenty-two inverses given above. He admits a partial and a full inverse of A, $\overline{S}\ o\ P$ and $\overline{S}\ i\ \overline{P}$; also a partial and a full inverse of E, $\overline{S}\ i\ P$ and $\overline{S}\ o\ \overline{P}$. Fourteen slaughtered innocents lie at the door of his definition, since it requires depressed quantity as one mark of a true inverse. This cuts off at one fell stroke the whole batch of inverses from particulars, because I and O are already depressed; and two, $\overline{S}\ a\ \overline{P}$ and $\overline{S}\ e\ P$, from A, because the inverse itself must not be universal. Eighteen of the twenty-two inverses are thus disposed of on the inversionist's own principles, 14 rejected and four accepted. Just what he would do with the remaining four, *viz.*, $\overline{S}\ i\ P$ and $\overline{S}\ o\ \overline{P}$ from A; also $\overline{S}\ o\ P$ and $\overline{S}\ i\ \overline{P}$ from E, I will not presume to say. Possibly they are putative offspring whom he has never met fairly face to face, and now that I have introduced these waifs he may adopt them. I may be unwittingly enlarging the scope of immediate inference by inversion. He is welcome to them. Some of them are as good, nay better (if one fallacy can be better than another) than those he now recognises. For instance, compare these two inverses from E: (*a*) No mathematician can prove that $2 + 2 = 5$; therefore some one who is not a mathematician can prove that $2 + 2 = 5$. (*b*) No mathematician can prove that $2 + 2 = 5$; therefore one who is not a mathematician *can not* prove that $2 + 2 = 5$. Most people, I think, would be simple enough to prefer the second because it is true. Vainly would the inversionist exhort them to prefer (*a*) because it is the regular inverse of E, $\overline{S}\ i\ P$, while (*b*) is unauthorised. It is $\overline{S}\ o\ P$, a "poor relation" of E, though quite at home with A. But let us see how it behaves with A for its invertend in a concrete example, and compare it with an unauthorised inverse of A, $\overline{S}\ i\ P$: (*a*) All dogs bark, therefore something that is not a dog does not bark. (*b*) All dogs bark, therefore something that is not a dog barks. Both are alike silly, and both alike illicit. We hesitate to say that one is just as *good* as the other, for both are bad. This example serves well to illustrate the point that $\overline{S}$ is always an unbalanced negative and therefore always illicit. It makes not a particle of difference whether the conclusion is negative (*a*) or affirmative (*b*). Dogs bark, therefore not-dogs (foxes for instance) $\left\{\begin{matrix}\text{bark} \\ \text{do not bark}\end{matrix}\right\}$. No matter which predicate we choose.

The change of subjects kills the inference in any case, and the double negative is absolutely impotent in the way of restoring the balance.

Even of the despised inverses from I and O something may be said. If they are more naughty and disreputable than the four "favourite sons," they are, at any rate, not much worse. Take, for instance, $\bar{S}\ o\ P$ from I: Some animals bite, therefore some things which are not animals do not bite. This is perfectly true, and not a whit more absurd than, No man can be both white and black, therefore some one who is not a man can be both white and black. The latter is the duly christened and fondly cherished $\bar{S}\ i\ P$ from E. In this case the favourite son is actually put to shame by the neglected waif. If the inversionist means to be stubborn in his creed I am really afraid he will in the end be obliged, as a matter of consistency, to take in the whole ragged family of inverses.

Euler's circles prove too much. They cheapen inversion, make it so easy and common as to bring it into contempt. Whether the Eulerian method does not at the same time condemn itself is a pertinent question. Let us recapitulate some of the astonishing consequences of the inversionist assumption that contradictories are identical with outside space.

1. This method is indiscriminate. The inversionist's pets get no favours from it, though it is based upon his own assumption. The spurious forms from I and O, and those unacknowledged ones from A and E, are read off just as easily as the four which are reckoned legitimate. But aside from inversionist favouritism, there are real differences. $\bar{S}\ a\ \bar{P}$ from O, for instance, a universal affirmative conclusion from a particular negative premiss, is surely less reasonable than $\bar{S}\ i\ \bar{P}$ from A, a particular affirmative from a universal affirmative. Yet the former is just as promptly read off from

, one of the diagrams of O, as the latter from

one of the diagrams of A. Glancing down the vertical columns of the table of inverses, we see the same conclusion from different premisses. This method is indiscriminate as to the data of its conclusions as well as to their relative merits.

2. This method gives contradictory results. From the same premiss $S\ a\ P$, we obtain both I and its contradictory, E, *i.e.* $\bar{S}\ i\ P$ and $\bar{S}\ e\ P$; also $\bar{S}\ o\ P$ and its contradictory $\bar{S}\ a\ P$. This, however, occurs only on condition that more than one diagram is used for a single proposition. In the case of E, with its single diagram this inconsistency does not appear. The too prolific results of this method, however, give fine opportunities for inconsistency. Drawing six distinct conclusions from a single premiss is suspi-

cious, as is also drawing the same conclusion from four different premisses.

3. This method is very hospitable to fallacies. No less than twenty-two of them are at home in that "untamed jungle" surrounding the circles. Even after the inversionist has rescued his four pets (if he ever can wash them clean of the taint of illicit process) on his own principles eighteen fallacies are still at large—eighteen inversion-fallacies at least, and how many more belonging to other kinds of inference we know not.

The difficulties of diagrammatic methods in Logic are certainly very great; perhaps they are insurmountable. Very simple diagrams simply interpreted in harmony with their direct and obvious meaning as it appears at the first glance, are the only useful ones, and their utility is very limited. Anything beyond this severe simplicity is open to two objections: (1) The figures, by reason of their complexity, exhaust mental energy in the effort to comprehend them, leaving no room in the mind of the student for the real logical principles intended to be illustrated; so that the diagrams hinder rather than help. (2) Modern refinements of the Eulerian method, especially its extension into adjacent space to represent contradictories, suggest a far greater and more insidious evil. Diagrams may not only blind us to fallacies already latent in our reasoning, but may also become fertile fields for fresh fallacies.

L. E. Hicks.

VI.—CRITICAL NOTICES.

The Principle of Individuality and Value: the Gifford Lectures for 1911. Delivered in Edinburgh University by B. Bosanquet, LL.D., D.C.L., F.B.A. London: Macmillan & Co., 1912. Pp. xxxvii, 409.

It is somewhat difficult to criticise this most brilliant work. To discuss the main principle on which it is based would scarcely be adequate, since in that principle there is nothing new. On the other hand, to describe and criticise the original and interesting applications of that principle would take an entire number of Mind. A brief exposition of the chief thesis of each lecture, and a few comments on it, seem to offer the best compromise, though one which is scarcely adequate.

The main principle of the book may perhaps be stated in the words of the Preface: "The things which are most important in man's experience are also the things which are most certain to his thought. And . . . this is not an accident but inevitable because importance and reality are sides of the same characteristic." Dr. Bosanquet not only realises that this view has been stated before, but maintains that we may start by considering it proved. "Indeed, I do not conceal my belief that in the main the work has been done, and that what is now needed is to recall and concentrate the modern mind out of its distraction rather than to invent wholly new theoretical conceptions."

With this I feel myself unable to agree. I cannot think that we have as yet arrived at any general theory of the nature of reality which can be taken as proved. Even if it is the case, as I believe it will turn out to be, that some form of idealism is true, it seems certain that it is not any form of idealism which has yet been put forward. The criticisms of opponents may be in many respects mistaken, but in some instances they have certainly disclosed defects which will require fundamental modifications. And more pressing, perhaps, than the criticisms of opponents, are the difficulties which arise when we look at the systems from within. The invention of "new theoretical conceptions" is, I submit, exactly what is most required in the philosophy of the present day. *Wholly* new, of course, they could not be, and need not be.

The phrase already quoted—"importance and reality are sides of the same characteristic"—may perhaps be taken as the key-note

of the book. By importance Dr. Bosanquet means, I take it, what is sometimes called positive value. And the whole structure of his argument seems to depend on this view—that the real is the important, and the important is the real. It is not quite clear to me whether this connexion of importance and value is held to be analytic or synthetic. I suppose, indeed, that Dr. Bosanquet might regard the antithesis as unjustifiable. But at any rate it seems clear that the connexion is direct. It is not that the real has the qualities X, Y, and Z, and that whatever has the qualities X, Y, and Z, is important. There is no need of any such middle term. The real as such is the important, and the important as such is the real—a conclusion which, if true, is certainly most desirable.

The first lecture is entitled "Introduction—the Central Experiences". "We begin then with the principle—the truism if you like—that in our attitude to experience, or through experience to our world, we are to put the central things in the centre, to respect the claims of the obvious which is neglected—to take for our standard what man recognises as value when his life is fullest and his soul at the highest stretch" (p. 3). Our standard of what? If of value, the standard might be satisfactory if we were supplied with another standard by which we could recognise when our lives are fullest. But Dr. Bosanquet means, I think, more than this. He is recurring, I suppose, to the principle mentioned in the preface, and the standard is one by which we are to judge of reality. And then, I submit, he is most certainly wrong in calling it a truism. It may be true, but it is not generally admitted, and it is not self-evident. If we are to have a right to believe it, it will have to be proved, and, if it were proved, it would disprove most of the philosophy of the past. Such things are not truisms.

Indeed Dr. Bosanquet seems inclined everywhere to underrate the differences of opinion which are to be found in the world. He says, for example: "We shall, on the whole, express and define, I believe, the reasonable faith of resolute and open-minded men" (p. 30). But is there at present any faith common to resolute and open-minded men, or is there any sign of such a common faith in the future? Surely resolute and open-minded men are found in disagreement on every question which has ever been raised in philosophy.

The only other point I have time to notice in this lecture is the protest against "the attempt to take any form of immediateness, understood as excluding mediation, for an absolute and reliable datum, whether in the form of an object of simple apprehension, called by the name of fact, or in the form of an indeterminate creative impulse called by the name of life, or in the form of a subject of experience, impervious and isolated, called by the name of self" (p. 15). The last clause would seem only to protest against Leibniz's Monadism, for no other thinker of importance has regarded selves as isolated. But Dr. Bosanquet is always inclined to hold

that if anything is asserted to be ultimately real, or if the existence of anything is asserted to be immediately certain, the reality in question is asserted to be "impervious and isolated". And in holding this it seems to me that he often fails to do justice to the position of his opponents.

Lecture II. deals with "The Concrete Universal". And it is the most important lecture in the book, since it is here that Dr. Bosanquet defines what he means by Individuality. He begins with an attack on the significance and importance of abstract generalisation. The concrete universal is contrasted with this. The concrete universal is the nature of a system which may be called, we are told, an organism, but for which Dr. Bosanquet uses by preference the name of a world. "A world or cosmos is a system of members, such that every member, being *ex hypothesi* distinct, nevertheless contributes to the unity of the whole in virtue of the peculiarities which constitute its distinctness" (p. 37). He goes on to say that here "a systematic identity subordinates diversity to itself, or, more truly, reveals itself as the spirit of communion and totality, within which identity and difference are distinguishable but inseparable points of view" (p. 46). These two accounts are apparently given as mutually equivalent, but it seems to me that the second goes a good deal farther than the first.

We are told that "the true embodiment of the logical universal takes the shape of a world whose members are worlds," because "The Universal in the form of a world refers to diversity of content within every member" (p. 37). The inevitable conclusion from this would seem to be that the members of every world are worlds, and that therefore the series of worlds within worlds is endless. Dr. Bosanquet, however, in a very interesting note, regards the absolute reality of such series as unnecessary and improbable. How this can be reconciled with the statement in the text, I am quite unable to see.

That general laws are inadequate as an explanation of the universe without the further conception of systems whose parts mutually determine each other may be admitted, and Dr. Bosanquet's contention that the latter conception is the higher—a view which was also Hegel's—has much to recommend it. But I think that the author goes too far when he maintains, as I understand him to do, that by means of the conception of such systems we can transcend general laws altogether. He would, I suppose, take England to be such a system. But this does not enable us to transcend such general laws as "no Englishman is a slave," "the members of the House of Commons are elected," "every English child has a right to free education". They remain absolutely true, and if they, and similar general laws, were not true, England would not be what it is.

Nor does it seem to me that Dr. Bosanquet has sufficiently considered what the nature of the unity in such a concrete universal would be. The nature of such a universal—as Kant pointed out,

and as Dr. Bosanquet, if I understand him rightly, recognises—cannot be expressed separately in the words. We can only say that it is the aspect of unity which is manifested in just those parts in just those relations. But the difficulty which I must confess that I feel is whether, when we say that half a dozen things are conceived by a concrete universal, or form an organic unity, we are saying much more than that they are half a dozen things in the same universe. Dr. Bosanquet appeals to the unities of art, but it is just here that the difficulty lies. If a gasometer were substituted for the tower of Salisbury Cathedral, the new building would be a different unity from the old one, and a much less beautiful unity. It would, I imagine, be, as a matter of empirical fact, much less in harmony with the desires of most of the people who see it, and—partly on this account and partly on others—the change would diminish the total amount of good in the world. But I cannot see that the new building would be less of a unity, more self-contradictory, or less real.[1]

The greater part of the Lecture is occupied with a discussion of the principle—so fundamental in Dr. Bosanquet's philosophy—that "truth is the whole". The question is too large for discussion here, and the author's arguments go along familiar lines. But we must notice his view that "we can and do stake" our whole belief in reality "on the general trueness and being of whole provinces of advanced experience, such as religion, or morality, or the world of beauty and of science. And these are a higher and deeper evidence of the being and motive of the real than are the formally undeniable judgments, undeniable because implying only the minimum of experience, to which the abstract shape of the principle of non-contradiction belongs" (p. 50). Whether the contention is sound or not—I am inclined to think that it is not—the arguments given in favour of it are of high importance, and deserve very careful consideration.

Thus we reach the idea of Individuality—"that which has nothing without to set against it, and which is pure self-maintenance within" (p. 68). Thus the Individual is a "world," but a "world" is not always an Individual. For, as Dr. Bosanquet points out, there can be no real Individual, by his definition, except the Absolute, while parts of the Absolute are also worlds.

I have only time to cite one more remark from this chapter: "There has been far too great a tendency to state the essence of Individuality not as the being oneself, but as the not being some one else" (p. 69). This seems to me profoundly true, and very important, though I am unable to agree with the author as to the

[1] I do not maintain that this is the truest view we can take of the universe. On the contrary I think that Organic Unity is an inadequate category—a view for which I can at any rate plead the authority of Hegel, however unpopular it may be among Hegelians.

precise sort of "being oneself" which deserves the name of Individuality.

In the Third Lecture the author maintains that uniformity and general law are not antagonistic to individuality. He discusses the views of Dr. Ward, Dr. Royce, Prof. Taylor, and M. Bergson. The first part of the lecture is occupied with argument on the nature of physical and psychical statistics, which would require special knowledge of a high order to criticise, or even to summarise. From this Dr. Bosanquet passes to the conception of the Uniformity of Nature, in the sense in which it is assumed by science. He points out that this principle does not in the least assert that the future will repeat or resemble the past (p. 92). It seems extraordinary that this point should ever have been misunderstood. It seems so obvious that such a law of progress, for example, as Leibniz asserts to be true of all spirits in heaven, would, just because of its absolute uniformity, render it quite impossible that the future should repeat or resemble the past. But the mistake has been made, and it was necessary that it should be pointed out. The particular form in which Dr. Bosanquet puts his refutation depends on his theory of the concrete universal, but the essence of what he says on this question does not depend on the acceptance of this particular form.

The result thus gained is then applied. "The important point is to disown the idea that the establishment of great *de facto* variety rather disproves true Uniformity (Relevancy) or proves a psychical nature. . . . Such an idea sets us wrong *ab initio* in our attitude to the characteristics of consciousness, teaching us to connect it with eccentricity and caprice—the negation of coherent system—instead of with system and rationality. The same fundamental error identifies the spontaneity of life with an unmotived diversity, and intelligence proper with an impotent identity" (p. 94).

The Lecture then goes on to show that Individuality is not incompatible with the validity of general laws. The validity of general laws under any circumstances, however, is only admitted under restrictions which arise from the position taken up in Lecture II. They are not as truly universal as the relation of the parts of an organic unity (p. 106) and the "approximate repetitions" which they express are "an imperfection" (p. 120).

The Fourth Lecture deals with the Teleology of Finite Consciousness. The author maintains that "teleology is a conception which loses its distinctive meaning as we deepen its philosophical interpretation" (p. 123), and again: that "every purpose, no doubt, implies a subjective value, but there is no reason why every true value should be a purpose" (p. 127). In the later part of the lecture he argues—as it seems to me with complete success—that we cannot suppose that conscious purposes would ever produce an ordered universe if it had to act on material which, apart from those purposes, was real and yet "a directionless material"

(p. 134). And again he maintains that inorganic nature is no less suggestive of teleology than organic nature—in the sense in which teleology can be maintained at all.

Incidentally we may notice Dr. Bosanquet's denial that man is more important than other creatures or the future than the past. "It is obvious that no such ascription of ultimate value to a particular class of creatures nor to a particular moment in time can be justified as an ultimate conception" (p. 126). As to the first, if it is only meant that the value of men is no more ultimate than that of angels, monkeys, and other conscious beings, it might well be admitted. But I imagine that Dr. Bosanquet means to go farther, and to deny that ultimate value can be attributed to anything in the universe short of the universe itself. In that case I must confess that his proposition so far from seeming to me to be obviously true, seems to me to be obviously false. It appears to me self-evident that every conscious self has ultimate value, and that nothing which is not a conscious self—whether the universe or a part of the universe—has any ultimate value.

On the question of time the point seems more obscure, and I only wish to protest against Dr. Bosanquet's description of his solution as obvious. On page 136 he says that "the great enemy of all sane idealism is the notion that the ideal belongs to the future". Of course if time is an inadequate way of looking at reality the ideal cannot be really in the future. But the possibility remains that it may be much more truly in the future than in the past or present, and that it may be as truly in the future as to-morrow's breakfast is. And whether this possibility is or is not actual appears to me absolutely vital with regard to the values of our lives.

On page 130 will be found a discussion of the relation of desire and satiety to enjoyment. Dr. Bosanquet points out with great clearness that their relation to æsthetic enjoyment is of a very subordinate kind, but holds that the case is different with regard to sensuous pleasures—a distinction for which there seems no tenable defence. The pleasure of a hot bath may be preceded by a desire for it, and will be followed by satiety, if prolonged. The same is true, as Dr. Bosanquet admits, of a visit to a picture gallery. But this, as he points out, leaves it true, about the picture gallery that "it is not the transition towards an unattained terminus that makes the essence of the activity". Neither does it make the essence of our pleasure in the hot bath. Dr. Bosanquet would almost seem to have been touched by Green's curious prejudice against sensuous pleasure, since he opposes æsthetic enjoyment to it as "true fruition".

Lecture V. is entitled "The Bodily Basis of Mind as a Whole of Content". Dr. Bosanquet rejects, as is well known, the Idealisms of Leibniz and Berkeley. His Idealism holds that Matter is as really existent as Mind. This renders his system in effect Dualistic. And we find here a fresh example of the rule that a system

which sets out to be Dualistic has a strong tendency to end as Materialism. Almost every word that Dr. Bosanquet has written about the relations of Mind and Matter in this lecture might have been written by a complete Materialist. For example, on page 200 (the italics are mine, not the author's), "If an idea cannot secure its own adequate realisation, it is 'not ideal enough'. It has not enough conformity with the environment; it does not really contain as much of the secret of coherence or perfection as it professes to contain. *I take it that a glance at the nervous system shows us this incontrovertibly.*" This is perhaps the most striking passage, but the whole of the Lecture is in the same tone.

Of course Dr. Bosanquet's actual position is very far from being materialistic. But his right to call himself an Idealist depends, if I understand him rightly, entirely on his view that the universe is an Individual, and that selves "in a secondary sense" are Individuals. Thus everything turns on two questions. When we say that things are connected by a concrete universal, are we really saying more than the materialist would say when he called them a group or an aggregate? And, if we are saying anything more, is it anything which increases the positive value to be attributed to the object of our statement?

The detail of this Lecture is most interesting, and it is possible to disagree with its main contention and to find oneself in enthusiastic agreement with some of Dr. Bosanquet's criticisms on other writers. I have only time to notice one passage. We are told that "Hegel's 'actual soul' is the perfection of a living body highly trained and definitely habituated" (p. 178). It is true that Hegel says this of the "wirkliche Seele," and "actual soul" is the literal and accepted translation of "wirkliche Seele," though our ordinary use of the word soul makes the translation somewhat misleading. But the view of Spirit to which Hegel gives this name is held by him to be one of the lowest and least adequate ways of describing its true nature. Before we reach a satisfactory account of Spirit this view has to be transcended again and again. We might as well take the category of Pure Quantity as a true description of the Absolute Idea as take Actual Soul as a true description of Spirit. And yet it is thus that Dr. Bosanquet seems to take it, since he tells us it "is not a retrogression from the deepest insight into mind".

In the next Lecture is considered Self-Consciousness as the Clue to the Typical Structure of Reality. In the first place Dr. Bosanquet maintains that Contradiction is not essential to Self-Consciousness. We have an interesting discussion of Contradiction, in which we are told that "if we say what is self-contradictory cannot be actual fact, then we must deny the actuality of our whole normal world which is the field of our knowledge and action" (p. 226). And again "in the life of conscious beings, again, contradiction is a felt experience" (p. 228). In spite of the

authority both of Dr. Bosanquet and of Hegel—who in this case is unquestionably on the same side as Dr. Bosanquet—I venture to maintain that the first of these passages confuses the actual facts with our beliefs about them, and the second confuses a conflict with a contradiction. Now all contradictions may be conflicts, but all conflicts are not, I submit, contradictions.

What *is* essential to self-consciousness we are told is not Contradiction but Negativity. The principle is that "an element of Reality can find completion only in what is not itself" (p. 234). I do not know if Dr. Bosanquet would permit this to be interpreted "only in *relation to* what is not itself," or whether we are to take literally his expression that the self must be *in* the other. From the parallel which he draws between satisfaction and self-sacrifice (which latter phrase again he seems to take literally) it would seem that the self has really got to get satisfaction by passing into something not itself, and so being "beyond itself".

On page 239 one notices Dr. Bosanquet's opinions that, *inter alia*, pain and conflict are essential for the manifestation of Reality, and that "if you turn all things into persons the differences which make life interesting would be gone".

Then comes a discussion of evil. Pain, and sin, and evil, do really exist, but "if we knew everything we should see and feel what finiteness, pain, and evil mean, and how they play a part in perfection itself" (p. 241). This seems to me an untenable compromise. It seems impossible to fall back, as I suppose Dr. Bosanquet does, on the view that the evil is transcended in the Absolute. For if the description of anything as evil is transcended, then it is not really evil, and, if this is universal, evil does not exist. And we are told that it does exist. But if anything is really evil, then, either there is something outside the Absolute (a view which Dr. Bosanquet would naturally not accept) or else there really is a real part of the Absolute which is really evil. Since the Absolute is an Individual, the nature of its parts will be determined by the nature of the whole. And how this can be without the nature of the Absolute being, at least, partly evil, I fail to understand. But if it is partly evil, are we entitled to call it perfection?

Lecture VII., which is entitled "Ourselves and the Absolute," is devoted to the support of Dr. Bosanquet's theory of the comparative unreality of the Self. In the first place he points out that the question cannot be settled by any appeal to the *primâ facie* reality of the Self, since it is impossible to think with any coherency on the nature of reality without rejecting much which appears *primâ facie* to be real. "This then is the fundamental nature of the inference to the absolute; the passage from the contradictory and unstable in all experiences alike to the stable and satisfactory" (p. 268). With this view, I imagine, but few philosophers would disagree. But then the question arises—what *is* contradictory and unstable, what *is* stable and satisfactory?

Dr. Bosanquet's view is that "individuality, the principle of reality and the consistent whole, takes us on beyond personality in the strict sense, beyond the consciousness of self which is mediated by an opposing not-self, into the region where we go out of the self and into it by the same movement, in the quasi-religion of social unity, in knowledge, art, and in religion proper" (p. 270). This passage is rather ambiguous. Does it mean that it takes us beyond that consciousness of self which is mediated by an *opposing* not-self, but that there is a consciousness of self which is mediated by a not-self which is not opposing? Or does it mean that it takes us beyond any consciousness of self which is mediated by a not-self at all? I suppose it to mean the latter, especially in view of his earlier statement (pp. 248, 249) that, though "the real foundation of self-hood" is "in some way possessed" by the Absolute, yet "contradiction and discrepancy are inevitable in the constitution of the finite self".

This doctrine seems to me quite untenable. Anything finite is inexplicable, and appears contradictory, if you ignore the existence of other things outside to which it is related, and with which it forms a unity. But this does not involve that there is anything untenable in taking the finite thing as absolutely real. There is nothing incompatible in the fact that A is in the relation B to the thing C, the relation E to the thing F, and so on, with the fact that A is a finite thing which, in its finitude and thinghood, is absolutely real. Dr. Bosanquet's argument seems to depend on a confusion of distinctness and isolation. Nothing finite is really isolated. But that need not prevent finite things from being really and ultimately distinct.

And to say that in proportion as the self develops it has to go out of itself seems to me a mere mis-statement. It has, no doubt, to connect itself by more numerous and more important relations with other selves, and with things of other sorts, if any other sort of things exist. But A does not cease to be A because its relations become more numerous and more important.

Nor can I agree with Dr. Bosanquet that in our highest experiences the self-hood of the self becomes less prominent. Our highest experience I take to be love. And in love it is just the particularity of the two selves which is the supreme element. The love is *his* love for *him*—and the he and the him are what makes it itself.

In the Eighth Lecture is discussed Individuality as the Logical Criterion of Value. Dr. Bosanquet first criticises the view that all judgment of value must be themselves ultimate or rest on other judgments of value which are ultimate. He complains that the advocates of this view have not shown enough respect for Plato and Aristotle. "It is impossible not to feel a certain surprise that without any kind of notice or any argument advanced, the leading conceptions of such thinkers should be altogether set aside" (p. 292).

If no view may be put forward in philosophy without an explicit refutation of all previous thinkers on the subject, the process of philosophical argument will be somewhat cumbrous. Are we to blame Dr. Bosanquet because, in his account of the structure of reality, he has set aside without notice the leading conceptions of Geulincx and of Malebranche?

But the arguments of Plato and Aristotle, as given by Dr. Bosanquet, fail. it seems to me, to support him. "The principle of these arguments in a word is this, that positive pleasure and all satisfaction, as distinct from an intensity of feeling which there is reason to suspect of being illusory, depends on the character of logical stability of the whole inherent in the objects of desire, and that what in this sense is more real, that is, more at one with itself and the whole (*e.g.*, free from contradiction), is also the experience in which the mind obtains the more durable and robust satisfaction, and more completely realises itself. This consideration prescribes the nature of the ultimate good or end which is the supreme standard of value. . . . And by this standard any judgment as to ultimate end or value can be criticised or estimated" (p. 298). And again, "we adhere to Plato's conclusion that objects of our likings possess as much of satisfactoriness—which we identify with value—as they possess of reality and trueness" (p. 317).

One step in this argument then is that satisfaction is value, and that nothing else is value. Now if the supporters of this position should be confronted with Kant, who declares that other things have value besides satisfaction, or with Bentham who maintains that nothing but pleasure has value, what would they do? They would not agree with them. But could they argue with them? No argument is given here, nor do I see what argument would be possible. They could, I take it, only affirm that satisfaction, and nothing but satisfaction was value. And thus their argument would after all depend upon an ultimate judgment of value.

Dr. Bosanquet, I venture to think, has misunderstood the position which he is discussing. His arguments (pp. 295-297) seem directed against the view that our immediate experiences, in an uncriticised and unanalysed form, are the supreme ethical criterion. To confuse the immediate with the ultimate would, as he says, be a fatal mistake. But I do not believe that the authors whom he criticises have committed it. Their contention is, I think, that *all* judgments must either be, or rest on, ultimate judgments, and that as the idea of good is simple and unanalysable, all ethical judgments must either be, or rest on, ultimate judgments of which good is one of the terms, in other words, ultimate judgments of value.

Is the universe good or bad? Strictly, we are told, neither. It is above the good. "It is . . . perfection and the standard of all goodness and value. Strictly, you do not value it: you value all else by it. Its value is the unit, and all other values must be adjusted so as to amount to it" (p. 310). This is rather perplexing. "Its

value is the unit," then it has value. And if it has value, we ought surely to value it, *i.e.* to recognise its value, which is the only way in which we can value anything. But we are told that we do not value it. At any rate this is clear, that, according to Dr. Bosanquet, there is no independent standard by which we can measure the value of what exists, no quality of goodness, the possession of which makes the existent good, while its absence makes it not-good. If this view were true, it seems to me that no judgment about the good and bad could possibly be true. But I do not believe that the view is true, I believe that there is a quality of goodness, as there is a quality of sourness, and whoever has the idea of either quality has a standard by which he can judge everything, pronouncing it to be good or not good, sour or not sour. One set of judgments is much more important than the other, but the logical position of both seems exactly the same.[1]

Lecture IX. is entitled Freedom and Initiation. In it the author takes up a position which I should be inclined to call deterministic, though he himself rejects the name, and prefers to call it determinateness, to distinguish it from that determinism which does not find the explanation of all action in a movement of our progress towards the whole. "The crucial point, then, which separates determinateness from determinism is the distinction between logic and fatality" (p. 340).

The discussion of the asserted indeterminateness of artistic production, and of the true significance of the greater difficulty of prediction in this sphere seems to me quite admirable, although hampered by the author's statement—apparently as a concession to M. Bergson that "prediction means doing a thing before it is done" (p. 331). If a physician predicts that a man will die next week, does he kill him now?

The discussion of the ethical question offers less room for novelty of treatment. Yet the following criticism seems to me as novel as it is brilliant. "What the ordinary advocate of freedom at bottom demands as 'the power to have acted otherwise,' is in the same breath to act and not to act, or, acting, yet not to act. It is to repudiate, not to accept responsibility, that is the qualification of the self by its behaviour. He is offered what he pretends to ask, that his act shall be his and himself; and he runs from his demand the moment he is confronted with its meaning" (p. 343).

[1] In this lecture (p. 308) Dr. Bosanquet remarks "Mr. McTaggart sustains the ultimate reality of separate persons against that of particular moments of time. But if these latter are unreal, the states of consciousness which fill them must be also in the same degree unreal." Not necessarily, I should reply, unreal *in the same degree*. What appears to us as an hour's ride, or an act of self-devotion, is not what it appears to be, since it appears as temporal. But the realities which appear to us thus—and also the fact of the appearance—are non-temporal realities which have value.

The last lecture is entitled "Nature, the Self, and the Absolute". It is, to a considerable extent, a summary of preceding results, and does not call for much separate criticism. Dr. Bosanquet repeats his objections to Pan-Psychism. We may certainly, I think, agree with him that Pan-Psychism has not been proved. There are attempts to prove it in Leibniz, in Lotze, and, as I believe, in Hegel. But none of them can be considered as a solid proof, in the form given to them by their authors, and whether such a proof is ever to be found or not, it cannot be said to have been found yet. But I cannot see that it has ever been disproved, nor can I agree with Dr. Bosanquet's objection (p. 363). "What becomes of the material incidents of life—of our food, our clothes, our country, our own bodies? Is it not obvious that our relation to these things is essential to finite being?" It does not seem at all obvious to me. Whether a self can exist out of relation to substances which are, or appear to be, material, I do not see that we can tell. We have no direct experience of such a state, and our existence *may* depend on such a relation to the material by a law which has not yet been discovered. But in what we *do* know about the universe I fail to see the smallest indication that a self could not exist without being in relation to what was really, or appeared to it to be, material. And as a self in this position could still experience knowledge and error, virtue and sin, love and hate, it need not find its existence either very empty or very uninteresting.

And here I must close a most inadequate comment on a most remarkable achievement. No book, I think, gives so good an account as this does of the brilliant and fascinating school which counts among its members Dr. Caird, Lord Haldane, and Dr. Mackenzie, but of which Dr. Bosanquet is perhaps the central and most typical member.

J. ELLIS MCTAGGART.

The Realm of Ends or Pluralism and Theism; the Gifford Lectures delivered in the University of St. Andrews in the years 1907-1910. JAMES WARD. Cambridge, University Press, 1911. Pp. xv, 490.

I DO not propose here either to summarise or to subject to elaborate criticism this most worthy sequel to Dr Ward's well-known Aberdeen lectures on *Naturalism and Agnosticism.* It is superfluous to summarise the argument of a book which all who care seriously for philosophy in Great Britain may be expected to study closely, sentence by sentence, for themselves, and elaborate criticism is hardly possible to a reviewer who agrees so thoroughly with all the main positions contended for that his natural impulse is simply to thank God that we have such a philosopher as Dr. Ward among us. At best, I can only offer the reader an impressionist picture of

the effect produced upon myself by a work in which φιλοσοφία appears at last in her true native shape with the disfiguring detritus which makes her in so many presentations as unrecognisable as the "old man of the sea," Glaucus, unsparingly purged away.

The first thing which strikes one about the work as a whole is that in it philosophy honestly appears as a gospel, or good tidings, which brings us hope that reason is on the side of those who affirm, not of those who politely, or otherwise, deny or ignore the ideals which are the spiritual meat and drink of "men of good will". Dr. Ward presents us with a most powerful plea for hopeful faith in a genuine God and a genuine life to come; nay more, he finds room in the world for prayer as an actual intercourse with God, and even for something, as he himself notes, not far removed from the Christian doctrines of purgatory, angels, and intercession. Many of us, who are still far from being old, are old enough to realise what a change this means in the temper and whole outlook on life of official philosophy. It means that, unless Dr. Ward can be put to silence, the "polite atheism" of the Spinozistic doctrines which we were taught in our eager youth on the alleged authority of Hegel, as the last word of a triumphant Philosophy which had seen through everything and found mutability and corruption everywhere but in its heartless "Absolute," have gone the way of the Naturalism to which his earlier Gifford lectures gave the *coup de grâce*. We are free again to believe, free to trust what we have felt all along to be our instinctive convictions just in our worthiest and most earnest moments, and free also humbly to admit our human incapability to solve all the questions which the world puts to us. A younger generation, which has never known what it is to be in bondage to the "Absolute" as conceived by Neo-Hegelian philosophy, will perhaps hardly be able to understand how much the deliverance means to those who have had to fight their way out of Egypt. And this is not all. The deliverance which Dr. Ward offers us involves no such desperate feats as the salvation promised us by Prof. James and his followers on the condition of making jettison of logic and stifling the demands of the intellect for a faith which shall be *reasonable* as well as living. We are not called on to explain away truth into practical utility, or to establish a licence for every one to believe or disbelieve just what he pleases. The faith to which Dr. Ward seeks to lead us is simply a natural extension of the practical reason itself, and in sheer logical acumen, in my judgment at least, he has the better of his antagonists in every pass of arms. He gives us a philosophy armed with which we need not be ashamed to render account to the critic of the faith that is in us, and on the strength of which we may call on others not merely to respect our own *Glaubensfreiheit* but to make our belief their own.

Roughly speaking, Dr. Ward's argument may be said to fall into three parts. In the first half of his book, entitled *Pluralism*, he is

concerned first of all to defend the characteristically British view that any philosophy which means to account for living experience as it is must start from the standpoint of Pluralism. We have to begin with the common-sense view of the world, the view we all take when we are not purposely inventing a metaphysical theory. The world, as it comes to us in this every-day experience, is experienced in action as well as in cognition, as a Many, a system of numerous individuals, related to us and to themselves in all sorts of ways, and of which both action and knowledge postulate that it forms a unity of some kind. But what kind or degree of unity the world exhibits is just the problem that philosophy has to solve; it is a pure *hysteron proteron* to assume, as the philosophers of the "Absolute" do, that the nature and degree of the unity is somehow given to us already in the data with which we have to deal. After an argument to show that if we begin with the One, *i.e.* with a ready-made theory of the kind of unity to be found in the world, we cannot find any road to the Many, and their very appearance *as* Many is an insoluble mystery, Dr. Ward proceeds to test the value of a pure Pluralism by a sympathetic account of the way in which, on a sound evolutionary theory, a world of originally wholly independent individuals might in the struggle for self-conservation organise itself into something like an orderly whole. Full justice is done, so far as I can see, to the possibilities of such a gradual unification of an original Many. At the same time it is clearly indicated where the limits of such a unification would fall, and how far they would come short of such a fully systematic actual unity as is presupposed in the notion *e.g.* of a *moral* order, or in the attitude of religion to the world-order, and it is made clear that *if* Theism, *i.e.* the belief in a personal transcendent source of order, can be defended against criticism, Theism would remove just the difficulties which are most formidable to a pure Pluralism. In the second half of the book, which bears the sub-title *Theism*, the alleged scientific objections to Theism as well as the world-old moral difficulties suggested by the "problem of evil" are discussed, and we are then brought face to face with the final difficulty of belief in a true God unaccompanied by belief in a life to come. The supposed objections to the latter are reviewed and found baseless, and we are thus left finally in the position that our moral demands on the world point to the belief in a righteous and loving supreme source of the world, while science and experience have nothing to urge on the other side.

With the main argument, as I have already said, I find myself in such entire accord that I am relieved from the duty of criticism. I can only say "Ditto" to Dr. Ward. It only remains for me to call attention to certain parts of the discussion which strike me as specially noteworthy by their excellence or their timeliness.

The criticism of the doctrine that Reality must necessarily be one single individual, of which all that we call persons or things

are mere "aspects" or "predicates" is, I venture to believe, final. No such doctrine can survive serious handling by a psychologist of Dr. Ward's standing. For, after all, the fallacy in Absolutism is ultimately a psychological one, much of the same kind as that made by the solipsist. The Absolutist first of all forgets that the world, as he experiences it, is not a panorama, but a realm of things on which he acts and which act in turn on him. He mentally puts himself in the position of a single spectator for whose amusement the whole of nature and history is being depicted on a luminous screen, and infers that the shadow-shapes which pass before him are all "determinations" of the screen. Then he goes on to argue that he, the spectator, is, like all that he sees, a passing coloration of the screen, and he finds himself a full-blown believer in the theory of the "One and All". What he has forgotten throughout is that experiences no more experience themselves than the figures on the magic-lantern sheet see themselves. As the shadow-show requires a spectator who is not a figure in the play, so the experienced continuum of objects is only such for an experient. It may be said that the experient *does* experience himself as he does other things. He sees his comrade, but he also sees his own hand or foot. He touches his food, but he can also touch his mouth. This is true, but what is more vital is that he also knows himself in a way in which he knows nothing else. He knows his own conative and emotive life, not by presentation, but by enjoyment, by actually being active as willing or feeling emotion. If he did not, he would not be able to draw any inferences from the external deportment of others to their inner feeling. Some technical distinction is clearly required to express this radical difference between the way in which we know our own "inner life," and the way in which we know nature, and in the main, our fellowmen. I should like, if the usage of language were not so tyrannous, to say that we "experience" our conative and emotive life, but merely "know" external nature. Plato would have said, quite correctly, that we "perceive the latter by the aid of organs with the help of the body," but "perceive the former directly by the soul itself without the intervention of organs". Prof. Alexander's way of putting it is that we "enjoy" ourselves, but merely "contemplate" other things. However we phrase it, it is fatal to Absolutism that our own unity as persons and experients is from the first "perceived without the aid of an organ," "enjoyed," not "contemplated". We only know what it is to be an experient *by* being one, as we only know what anger is by being angry. This fits in well with Dr. Ward's own language when he finds the source of our consciousness of our own unity as experients in Kant's "synthetic unity of apperception," though I confess to finding Kant's phrase a cumbrous and possibly misleading name for a very simple matter.

A second matter of great importance in respect of which I find

Dr. Ward's treatment masterly, is his account of the contingency involved in all actual matter of fact. I mention this along with the criticism of Absolutism because rigid determinism seems to be absolutely necessary in an Absolutist philosophy, and yet morally ridiculous, if not scientifically ridiculous as well. For one thing an Absolutist universe must be, as Prof. James has said, and as Dr. Ward repeats, a "block universe," and there is no room in such a universe for alternatives. For another, there is only one *fā'il-i-haqiq* or "true agent," in such a world, as the Sufis have always taught, and no being less than the Absolute can therefore be really "responsible," since no lesser being is an "efficient cause" behind which you cannot and must not go in your search for the person on whom to throw the "blame," of what happens. If it is ever possible to say "*I* did it," the meaning must be that "I" am not merely a link in the sequence of disguises of the Absolute, but myself an absolutely individual subject, related to my acts as the Absolute is to its; I must, as Dr. Ward puts it, be a genuine Creator, not a mere channel for the "one spirit's plastic stress". Hence Plato and Aristotle could consistently insist on moral freedom and responsibility precisely because both of them believed in a real contingency, a "wandering cause," a realm of "what can be otherwise". The odd thing about our modern British Hegelians is that though they persuade themselves that they are the true spiritual heirs of Plato, and though they, of course, undertake to show how freedom and determination, like all other antitheses, can be made to vanish in a higher unity, the most distinguished of them regularly come down, when they are discussing practice, on the determinist side of the fence. "Self-determination" is verbally admitted, but the value of the admission is negatived by explaining away the "self" into a *product* of anterior "conditions," and "real possibilities" are carefully denied. An exception must be made for T. H. Green, who virtually insists, as Dr. Ward does, on the vast difference between saying that an act is "determined by" the agent and saying that it is "determined for" him, but Green fails to make it clear that this distinction is only possible for a philosophy which denies that a self is a "product of conditions" at all. *I.e.*, to make it, you must either be a radical pluralist with a system of unoriginate selves, interrelated but independent of one another not only as regards their existence, but as regards their φύσις or *essentia*, or else a Theist, holding that at any rate the *anima rationalis* in every man is in the fullest sense *created* by God.

As a minor point, I gather from the Appendix that Dr. Ward holds that determinism is a theory which no man could have hit on from an analysis of his own acts, but must have begun as a speculation about the connexion of acts in which the spectator was not the agent. It would be specially pleasing to me to find that this is a correct account of Dr. Ward's view as I tried myself, some

years ago, to show that the whole supposed difficulty about freedom arose from tacitly adopting the standpoint of a spectator observing the behaviour of others, and then forgetting that what appeared to be "determined" was only so relatively to the assumed spectator.

With respect to the theological arguments for "predestination," while I am wholly in accord with Dr. Ward's solution, that predestination only looks to be a consequence of Theism when God is thought of as unable to create beings who can create in their turn, in fact as a cosmic constructor of mechanical toys, I cannot help feeling that he is a little unjust to Christian theology in his apparent assumption of the Westminster Confession as the standard of orthodoxy. My own bringing up as a boy was among persons who regarded themselves as thoroughly orthodox Christians, but I remember that I was taught to regard the Calvinist denial of free-will, with the cognate doctrine of the "divine decrees" as the most monstrous of all heresies. To my early instructors Calvinism was much what Jansenism was to Louis XIV., and I recollect seriously doubting whether a Calvinist could by any chance be saved. Prof. Ward, I take it, was not thus reared on the doctrine of Laud and the Jesuits.

In connexion with this matter of freedom, I doubt whether Dr. Ward need have made such concession as he does about the Divine omniscience. I do not myself see that it follows from the admission of freedom and contingency that there are future facts outside God's knowledge. And it is something to have the great scholastic theologians, the last persons to overlook such a difficulty or to be content with any half-hearted treatment of it, on one's side.

According to the doctrine which finally triumphed in the Church, it is true both that God foresees all our acts, and that we are genuine free agents. And the problem is one which depends on no new data discovered since the days of St. Thomas. This affords at least some presumption that his view is not patently absurd. To me it seems obviously sensible. As Mr. Bradley long ago said, it is not foreknowledge of our choices which we feel in itself irreconcilable with human freedom. We expect intimate friends to know how we shall choose to behave in danger or temptation, and we should be hurt if they did not. It is only the claim to predict our behaviour without such knowledge, by inference from given data, which alarms or annoys us when it is made by the astrologer or the fortune-teller. Further, the more intimate our friend's association with us has been, the more fully we think he will be able to tell in advance how we shall behave. If we may pass to the limit, then, I submit, that to the genuine Theist, who looks on God as being more intimately present to him than the nearest of earthly friends, and always thus present, there is no logical difficulty in believing that, much in the same way as a

human friend can tell confidently how we shall comport ourselves in some situations, God knows, from the insight of divine love, how we shall comport ourselves in all. Indeed, He must have this knowledge if He is to be a God in whom we can put trust for help in all our necessities. If a choice of mine could take God by surprise, how could He still be "God who knowest our necessities before we ask," or how could we pray that He would give us by His Spirit *recte sapere in omnibus?* As for the really objectionable kind of fore-knowledge, no one, I conceive, has ever thought of God as a magnified fortune-teller or palmist inferring our future course through life from data which are *not* our character.

There are one or two other cases in which, as it seems to me, Dr. Ward makes "Christian theology" responsible for views which are in the opinion of the great mass of Christians actually "heretical". Thus, in connexion with his very interesting discussion on the advantages which a sound evolutionary natural science confers on theology, he reckons it as not the least of these merits that we can, in the light of evolution, escape from the need for any doctrine of "original sin" to account for the low moral and spiritual level of savage humanity. I do not feel quite sure that *any* theology can be devised which will wholly get rid of what seems to me to be less a theory than a patent fact, and I am quite sure that Dr. Ward's hard language about the dogmas concerning the *peccatum originale* would have been modified if he had taken his notion of what *peccatum originale* means from some other source than the Westminster Confession. "Original sin" is there, in the definition quoted by Dr. Ward, identified with the "total corruption of man's heart whereby we are utterly indisposed to all good and wholly disposed to all evil". Now *such* a "total depravity of man" is, no doubt, an outrageous unfact, and it would be all to the good to have any scientific Theism which would dispense us from the necessity of believing in so ridiculous a slander on human nature. But fortunately the adherents of this doctrine have always been a minority among Christians. If Dr. Ward had taken the trouble to go back to the much better authority of St. Thomas, he would have found there a theory of *peccatum originale* which corresponds so closely to the known facts on which he himself dwells that I am sure he would have dealt more gently with it. Thus we read (*Contra Gentiles*, iv., 52) *patet igitur quod vitium originis ex quo peccatum originale causatur provenit ex defectu alicuius principii, scilicet gratuiti doni, quod naturae humanae in sua institutione fuit collatum.* The meaning is that the *peccatum originale* consists simply in the defective concepts of the Good and the weakness of our rational conception of Good, such as it is, to order and control our appetites, which are patent facts in human life. There is nothing in this conception of "original sin" to give rise to any conflict between morality and theology, no assertion of a "total depravity" of the human heart in virtue of which it wills

only evil continually. All that evolutionary science can correct in St. Thomas is a purely historical assumption, *viz.*, that the first man did not suffer from this defect, which is said to be due to the withdrawal of a special grace, until he harkened to the voice of his wife and did eat. Apart from St. Thomas's error in taking the narrative of Genesis for history, his account of what "original sin" *is* is strictly in accord with the observed facts of human life.

So to take another point. On page 425 Dr. Ward's language about the "moral enormity" of the belief that those who "die outside the pale of Christianity" are "lost eternally," implies, I fear, a charge against Christians of holding a view which, in point of fact, exists, if at all, among a few small and ignorant sects, and is emphatically *not* that of the great Christian Churches. *Extra ecclesiam nulla salus* is, no doubt, formally the doctrine of both the Roman and the English Churches. But what is it to be *extra ecclesiam?* I think I may safely say that no Anglican theologian interprets the phrase in the sense put on it in Dr. Ward's quotation. At no time have the best Anglican theologians taught that Nonconformists are as such "lost eternally". And the assertion that they have predicted such a fate for the "virtuous heathen" rests on nothing but a simple misunderstanding of the 18th Article. The Church of Rome, in the same way, can avoid the "moral enormity" by the important distinction between the "soul" and the "body" of the *ecclesia*, the "*anima ecclesiæ*" embracing all who have honestly endeavoured to live up to the measure of the light vouchsafed. (See the authoritative article "Church" by Fr. Thurston in Hastings' *Encyclopædia of Ethics and Religion.* Even in the Middle Ages St. Thomas and Dante had developed views obviously capable of very wide extension. St. Thomas, like St. Bernard before him, expressly denies that the "baptism of water" is indispensable for "salvation," and Dante is presumably orthodox in boldly placing Riphæus, the *iustissimus unus* of Virgil's Trojans, high in Paradise.) The great Protestant Churches, so far as I know, are equally guiltless of the hateful doctrine which Dr. Ward seems to charge upon Christianity. I do not deny that individual theologians have held it; I only say that it has never been *de fide* in any important division of the Christian Church. It has always been compatible with strict orthodoxy to deny it, and it is now universally denied by the best authorities. Another theological matter upon which Dr. Ward seems imperfectly informed is the "Romish doctrine of purgatory". He rightly regards this as philosophically infinitely inferior to the Platonic doctrine, which, by the way, I know to be held pretty widely at the present day in the English Church. But he reveals inacquaintance with Roman theology in his surprise at the want of moral efficacy in the Romish doctrine (p. 406). But why *should* there be any profound ethical significance in the Romish purgatory? As Dr. Ward says, the purgatory of Rome is merely 'expiatory'. This means that it caricatures the

Platonic conception on two points. There are two possible ways from Plato's purgatory, a way up and a way down. From the Roman purgatory there is only one, the way up. Romanism is as hard as Protestant revivalism on the man who has not "found salvation" before he dies. For him there is only the worm that dieth not and the fire that is not quenched. Only those who are at death assured of ultimate salvation get into purgatory at all. And the object of their detention there is not, as with Plato, to teach them wisdom by suffering, or to train their weak will towards good. The will of the "holy souls," it is expressly taught, is already from the moment of death perfectly fixed towards Good. You can no more sin in Purgatory than you can sin in Paradise. The only object of purgatory is to be *not* purgative but simply retributory; you are paid out there for sins for which you have not paid a sufficient mulct in temporal suffering before death. Hence, as there is no moral aim of making the sufferer better, purgatory as represented by the Roman Church is, of course, wholly unethical, and the notion that a ceremonial performance can release the soul from it, or diminish the period of detention is quite in keeping.

With Dr. Ward's own defence of the genuine Platonist theory, including its completion, the doctrine of the succession of lives, as probably the best working hypothesis for the kind of Theism which, as I agree with him, Pluralism demands as its intellectual as well as practical completion, I find myself once more in full accord. Only I do not understand why on page 404 it looks almost as if he rejected the "creationist" theory of the soul's origin which I understand him to adopt elsewhere. However many incarnations a dominant monad passes through, either it must have been everlasting or not. And if not, Leibniz's contention holds good that a monad cannot be gradually produced; it must begin to be "at a stroke," that is to say, it must have been created. I see no valid reason for preferring the theory of the eternal pre-existence of all the monads, while the sense of utter dependence on God which is characteristic of all genuine and vital religion commends the other alternative. Moreover, in principle, Dr. Ward's own reasoning throughout his controversy with the atheistic pluralist, seems to me to coincide with the Aristotelian argument for the First Mover, in which I can detect no signs of invalidity. Creationism thus, to my mind, holds the field against all comers. Of course *we* being, *ex hypothesi*, creatures, cannot imagine what creation is like. Or, to put it more precisely, the nearest analogon in our life to God's creation of the world of persons and other monads is the relation of the artist or statesman to *his* "creation," or more generally of an agent to his act. But, though we can all "enjoy" the experience of "activity," none of us can "contemplate" it in another; all we can "contemplate" is mere sequence of movements, as Dr. Ward himself rightly insists. Hence we cannot strictly "picture" or "imagine" or

"describe" the creative attitude, and our failure to do so is no argument whatever against the reality of the fact, provided it is demanded by what seems the only satisfactory account we can give *of* the unity of the world as a moral, as well as a natural, order. I am inclined to think Dr. Ward has treated the positivist and agnostic who put the unimaginability of creation forward as a reason for not believing in it more gently than they deserve. At the same time I find him a little indiscriminate in his censures of the "old" creationism. Presumably, the "old doctrine" he has in view is that of the creation of the physical world *en bloc* about 6000 years ago. But it is well to remember that "creation" has never meant more for scientific theology than what it means for Dr. Ward, the complete dependence of the created world on God. And we might even add that since the doctrine of the derivation of the human soul by "traduction" from that of the parents has always, from a very early date, reckoned as a heresy (though it has been supported in modern times by some great names, *e.g.* John Wesley), the "old" creationism, at least as generally taught, explicitly insisted on the conception of "new beginnings" within the world which is commonly put before us as eminently "new," by writers whose pride it is to be heretics, while they are really so much more orthodox than they suspect.

A further most important and admirable feature of the book is the clear and convincing way in which it is brought out that what is really meant in modern science by "evolution" is not really "evolution," —the unfolding, or expansion of what has been there all along, but epigenesis, the production of the genuinely new along a line of ever-growing determination. It is this definite advance in scientific knowledge which must compel the monadism which seems to be the only type of metaphysical theory that does justice to the existence of a world of experients to depart from the old monadism of Leibniz which is everywhere conditioned by his conception of development as a literal unfolding of something actually existing in miniature in the very first germs of the created world. And I may note that our modern exponents of the Absolute also seem always to have the Leibnizian notion of incapsulation before their eyes when they talk of evolution. What they mean, so far as I can discover, by the word is a curious compound of this obsolete biological conception with the Hegelian concept- or pseudo-concept of a dialectical, timeless, and phantasmagorial serial arrangement of logical notions. But incapsulation seems, at least, to be an indispensable feature in the concept, and hence, again, the bias of the whole school to a determinist interpretation of human action. Since their whole tendency is to regard everything as being already there, before it begins to be "incapsulated," so to say, in its "conditions," they naturally look at the effects of our deliberate choice in the same way, and tend to talk as if they were there before the choice is made. Hegel spoke of himself as a Lutheran (*ich bin es und ich will es bleiben*, he says in a curious outburst on the doctrine of Consubstantiation in the *Philosophy of Religion*), but the

natural affinity of his peculiar view of evolution is with Calvinism and its "divine decrees". Perhaps this may explain why Scotland has supplied so many of the chief exponents of his system in our own days.

Of Dr. Ward's plea for the life to come, I have nothing to say in detail because I am so absolutely in sympathy with him. "It do my heart good," as Samuel Pepys wrote after seeing a great lady's stock of petticoats and linen, to read so thorough an exposure of the miserable positivist attempt to find a substitute for the individual soul's arrival at the City of the Quest in an "immortality of the race," or an "unending progress" of the species, which the positivist knows at heart to be, on his own principles, an impossibility, exposed with such merciless logic. There is just one question which Dr. Ward does not, I think, explicitly raise, but it shall be mentioned here because it lies directly along the main line of his thought. So long as the human race has not reached its spiritual acme, it may be an inspiring thought that though we shall not see the "good time coming" we can at any rate hasten its advent by our labours and sorrows. But suppose this "good time" has already come, I presume it would be possible, on his own theory, for the positivist to know that it had come, and that at best all the future generations of mankind could effect by their efforts would be to retard a little the inevitable decline from civilisation to savagery, from humanity to mere animal existence, and final universal death.

However atheistic men might have come to be in the positivist millennium, their philosophy of life would then have to be utterly pessimistic. Their only hope would be to make the "second childhood" of humanity as agreeable and painless as might be. It is this secret sorrow of an enthusiast for humanity who knows that "second childhood" is the best he can look forward to for his race, that makes the millennial picture of, *e.g.*, William Morris's "News from Nowhere" such a melancholy spectacle. Perennial aspiration for more and more of knowledge, beauty, goodness see us impossible without confident faith that "actual life comes next" and that God will not shirk His task of making "the heavenly period complete the earthen". Hence the positivist and the Absolutist, who, where practical life is concerned, virtually behaves like a positivist, seem to me to be committed to the ostrich's device of burying his head in the sand, unless he is willing—and he never is—to tell upward-striving humanity that it is and has always been in the position of the fox jumping at the fruit out of its reach. And if you do tell them this, and get them to believe it, how long will it be before they, like the fox, resign themselves to the crying of sour grapes? One need be no "egoist" to agree with Dr. Ward that, as Prof. Varisco puts it, "Conservation of values is impossible without conservation of persons".

A. E. TAYLOR.

———

Varia Socratica. First Series. By A. E. Taylor. St. Andrews University Publications, No. IX. Oxford: James Parker & Co., 1911. Pp. xii, 269.

The riddle of the personality of Socrates, with the resultant problem as to the nature of Plato's individual contribution to philosophic thought, exercises a recurrent fascination on the successive generations. In our own day the drift of Platonic scholarship has been towards a revision of the treatment of the diatessaron upon which the verdict depends. The nineteenth century, at once too sceptical and too constructive in matters Platonic, may be said, amid bewildering divergences of opinion on almost all else, to have shown substantial agreement in the view that the Platonic Socrates is a conventional and easily penetrated dramatic disguise for Plato's self. If then the *Clouds* of Aristophanes may be to all intents and purposes ignored or in the alternative subjected to a superficial misinterpretation, we are left with that inadequate Boswell, Xenophon, or with Aristotle, or with both, the proportions of the contamination varying in the different theories, as alone portraying, with any degree of fidelity, the historic Socrates. And what a Socrates! Perhaps 'one of those inestimable bores who are the salt of the earth,' to borrow what we believe was originally a description of Robert Owen. But the stress in any explanation of the undoubted influence of Socrates must then be laid not upon his teaching but upon his life and the circumstances of his death. Even so the presumed idealisation by Plato, his choice of such a figure to mask his own gifted personality, is well-nigh inexplicable. But the way is left free for all sorts of speculative constructions of Plato's philosophical development.

A reversal of this attitude was inevitable. The solution of the problems of the doxographical tradition as to the pre-Socratic philosophers has led to an increased and substantially accurate knowledge of the intellectual atmosphere of the fifth century. A happy breakdown in the system of watertight compartments in Greek scholarship has brought in contributions from so widely separated spheres as, *e.g.*, the non-philosophical poets and the medical writers, that have opened our eyes to the ferment of the age of Socrates. If he was untouched by the spirit of his age, he was not only not its greatest personality, he was not even in any sense a leader. As we retroject more and more of the learning and culture that we find in Plato into the pre-revolution period, the more we are compelled to seek the historic in the Platonic Socrates, with less and less discounting for idealisation. To the movement in this direction Prof. A. E. Taylor's five brilliant essays contribute the first instalment of what may be called its general polemics. He promises too that the rehabilitation of Plato's portrait of Socrates shall be followed by a reconstruction of Platonism, so that we shall not lose the lineaments of the disciple with the

recovery of those of the master. In his support of the main thesis Prof. Taylor does not of course stand alone. And there has apparently been some pooling of materials with Prof. John Burnet. But in much of his detail and in some of his devices of method he exhibits a high degree of originality, and by the generous scope of his complete plan he may be said for the first time effectively to occupy the whole field of enterprise. He reminds strongly now of Dümmler, now of Krohn, but he works of course with different instruments and with a different organising idea, and so to a different end. The Socrates who is presented to us as the veritable historic figure, implied in all four accounts, but distorted in one picture, fully portrayed in one only, may be summarily described as the Socrates of the *Phædo*, with his affinities to Pythagorean thought, his familiarity with and sentiment for the 'rule' of the Orphic initiates and its central principle of the probationary nature of life in the flesh, with his past of strenuous scientific inquiry, and his present hold on the doctrine of ideas and upon that of indiscerptible and therefore eternal soul. For the fidelity of the *Phædo* there are strong æsthetic and moral reasons of a special kind. But other dialogues give, it is pointed out, precisely the same picture. They are in Aristotle's view to be grouped with the mimes of Sophron and Xenarchus as realistic prose dramas delineating human characters and their interaction. If we will but look, we are to find the characterisation just.

Prof. Taylor's first essay deals with the *Apology of Socrates*. The indictment for impiety included three counts, disrespect to the official cult, adhesion to an unrecognised cult, and depravation of the younger generation. If the first two charges are not merely thrown in to weight the third, the second and the way in which it is dealt with in Socrates' defence obviously raise a problem. If the 'divine sign,' humorously suggested in the defence as a ground for the second charge had been really a matter for indictment, nothing of current belief and religious practice was free from attack. What Prof. Burnet happily compares to the Highlander's second sight, and what M. Prosper Despine accounted for long ago in his *Psychologie Naturelle* as a misunderstanding by Socrates himself of the combination of shrewd practical judgments, mostly cautionary, with auditory symbolism or imagery of a specially vivid kind, was as nothing by comparison with contemporary developments in augural medicine and the like. Prof. Taylor's solution is to conceive the second charge to be true in the sense intended and to be left unanswered because indeed unanswerable. If not a Pythagorean in the strict sense, *e.g.*, probably not vegetarian, if we accept the humour of the description of the City of Pigs in *Republic*, ii., Socrates was yet chargeable with communion with the Pythagorean exiles in an unauthorised and secret mystery, reasonably suspect of being anti-national and at the least anti-democratic. Public opinion was against the Pythagorean conception of philosophy as a

meditatio mortis or of life in the body as the true death and burial of the soul, as Prof. Taylor well shows from words of Theseus in the *Hippolytus*, and from the charges against Euripides in the *Frogs* of Aristophanes, where the doctrine of σῶμα σῆμα is a crowning impiety, coming as a climax to the sacrilege of one heroine and the incest of another. But it is only as associated with cult that they are indictable. The Orphic beliefs of Socrates—the *Phædo* shows that Socrates is not committed to the detail of Orphism even on the theosophical side, as distinct from the magic condemned in the *Republic*,—come out, it is contended, after the condemnation, when alone they could with propriety find expression. This is but one of Prof. Taylor's many skilful uses of the distinctions between the several stages of the trial. The whole argument is of course a hypothetical construction, but it might well be true, if the characterisation of Socrates can find support from elsewhere, as *e.g.*, from the *Phædo*. The learning with which it is supported, and incidental results, for example, with regard to the text in certain passages of Æschylus concerned with clairvoyance in sleep, are of an independent value.

If it be said that Xenophon's representation of the meaning of the charge makes against the view taken, it is to be answered that the young military adventurer had no intimate knowledge of Socrates; the retired officer, for whom Socrates was the victim of the democracy, was demonstrably inaccurate, as when he claims to have heard Socrates speak of the battle of Cunaxa, self-contradictory as, for instance, with regard to the master's attitude to the mathematics, dependent apparently upon Platonic dialogues for much of his material, as in a notorious conflation from the *Phædo*, and concerned to maintain that Socrates was guiltless in that he held no views at all that went beyond platitude!

Prof. Taylor is surely wrong in his insistence that the charge was one of *importation* of unauthorised cult. Nothing is alleged but introduction. And we should demur to the statement that 'Eleatics were regularly reckoned in antiquity as a sort of heterodox Pythagoreans' (p. 18), even though 'in all probability the school followed the Pythagorean "life"' (p. 20, n.).

The second essay on "The Aristotelian Socrates," though Prof. Taylor is somewhat apologetic for its less polished form, is equally striking. The writer first essays the annihilation of what is called Fitzgerald's canon, according to which, while Σωκράτης in Aristotle always signifies the historic Socrates, ὁ Σωκράτης always designates the literary or Platonic Socrates. He then proceeds, by a consideration of Aristotle's references to either, to show that the case for regarding Aristotle as an independent witness is a weak one, since upon a full survey his allusions seem, with no important exception, to be such as may have been drawn from Plato and the Academic tradition. Finally we are offered a reconsideration of the one passage commonly interpreted in a way strongly to contravene this conclusion.

As regards the first point. We have all of us at one time or another been fascinated by the simplicity of the alleged canon, and have applied it here and there, and then been puzzled when it has seemed to work less happily elsewhere. Prof. Taylor takes many instances not only of Socrates but of other proper names where there is both a literary and an historical personality in question, and decisively invalidates the canon, with even a superfluity of evidence, since, *e.g. Met.* 1078 *b* 30 as compared with 1086 *b* 3 *sq.* would of itself suffice. This piece of work at least will not need to be done again.

On the other hand it is clear that the second of Prof. Taylor's points, viz., his induction that such of Aristotle's references to Socrates as are of philosophical importance may all have been derived from Platonic sources, is decisive only if we allow his rejection of the traditional interpretation of *Met. M.* 1078 *b*. With this passage *Met. A.* 6 where Socrates' influence on Plato is strongly asserted, Plato's divergence from Socrates definitely indicated, and Platonism differentiated from Pythagoreanism specifically by doctrines which are in no way Socratic, can alone compare in significance for Prof. Taylor's thesis. We have in *Met. M.* 4 two distinct positions enunciated. The first is the service of Socrates to science through his inductive λόγοι and his insistence on general definitions, —the latter for the first time in ethics, since certain anticipations by the Pythagoreans were connected with 'numbers'. The second is the non-separation by Socrates of his universals and definitions from their particulars (*cf.* 1086 *b* 4) in which he contrasts with a group of thinkers who held the doctrine of separation and called the separate or pure universals ideas.

Now Socratic 'induction' and definition are undoubtedly exemplified in abundance in Plato, but Prof. Taylor is correct in refusing to allow that Socrates admitted examples as proof, or that it is clear that he definitely stopped short at the subjective class-concept as opposed to objective essence. The medical writers (p. 73) had already a terminology of postulate (ὑπόθεσις) and verification (ἐπάγεσθαι μαρτύρια) which corresponds rather to the more advanced dialectical method of the inner circle of the *Phædo* than to the παραβολή of the dialogues of search. On the other hand we venture to think that Prof. Taylor underestimates the heuristic importance attaching to the simpler process, the extent to which it was regarded as enabling insight to work, when inquiries were on foot as to the essential meaning, αὐτὸ ὅ ἐστιν, of a conception. It is a question of stages. And some discussion of *Politicus*, 278, with its difference from Hippocrates in the use and associations of ἐπάγειν would be necessary, if the history of induction and its terminology is adequately to be made out.

The other matter, however, is the crucial one. So far back as Alexander of Aphrodisias the interpretation prevailed that the separatists were οἱ περὶ Πλάτωνα, so that the passage draws a radical

distinction between the Socratic view of universals and that maintained by Platonism. Prof. Burnet and Prof. Taylor, however, regard the distinction as obtaining rather between the historic, *i.e.* the Platonic Socrates on the one hand and οἱ τῶν εἰδῶν φίλοι as portrayed in *Sophistes*, 248 *sqq.* These so separated Being and Becoming that true δόξα was impossible, and the gist of Plato's retort is, that knowledge as process would be so likewise. The χωρισμὸς here is undeniable, and Prof. Taylor develops a constructive theory as vast as some that he rejects. The dissent from the Platonic form of the doctrine of participation has affinities, he points out, to the argument in the early pages of the *Parmenides*. The familiarity of the Eleatic stranger of the *Sophistes* with the dogma again suggests an Eleatic provenance. The reference alike in *Sophistes*, 248, and *Met. M.* is to 'a school of mathematicians, half-Pythagorean and half-Eleatic' (p. 87), possibly represented at the date of the *Sophistes* by 'the circle connected with Polyxenus and the mathematician Bryson' (p. 85).

We confess to finding some little difficulty in the phrase 'half-Eleatic'. To desert the One of the absolute monism was to become an Eleatic stranger, a stranger alike to Eleaticism and to such of the Socratic circle as had not undergone the baptism of the Eleatic Logic. Proclus, however, *in Parmenidem* (Stallbaum, p. 562) says ἦν μὲν γὰρ καὶ παρὰ τοῖς Πυθαγορείοις ἡ περὶ τῶν εἰδῶν θεωρία, καὶ δηλοῖ καὶ αὐτὸς ἐν Σοφιστῇ τῶν εἰδῶν φίλους προσαγορεύων τοὺς ἐν Ἰταλίᾳ σοφούς, and if we regard 'the friends of ideas' as a group of Pythagoreans all seems to go well at first with the identification of these with the separatists of *Met. M.* Οἱ δ' in 1078 *b* 31, which Mr. Ross we see translates 'his successors,' could be referred not unreasonably to οἱ Πυθανόρειοι in 21, and their non-use of the formula of μέθεξις is one of the differences from Plato noted in *Met. A.* 6. But then comes the strong point in favour of the traditional interpretation that the phrase as to calling this sort of reality ideas (1078 *b* 31 *sq.*) is that used by Aristotle unambiguously of Plato himself in distinction from Socrates (*Met. A.* 6, 987 *b* 7 *sq.*). And Aristotle's whole criticism of the 'ideas' is governed by a rejection of 'participation' as metaphorical, and the consequent presumption of a χωρισμός. It seems then that while 'the friends of ideas' may possibly be identified with a Pythagorean group, and we must regard Plato as contrasting with this group, we must at the same time take it that Plato was regarded by Aristotle as, in this matter, more Pythagorean in his affinities than Socrates, and as committed at least inferentially to a separatism to which Socrates was not. The phraseology as to the doctrine of ideas on page 71 is a very real contribution to clearness on this difficult subject. On the other hand the following page perhaps shows Prof. Taylor at his worst.

The relatively short essay on the διισσοὶ λόγοι which follows next in order is of less significance for the rediscovery of Socrates. All that can possibly turn upon it is some added emphasis upon the

dialectical development of the fifth century, and some dubious and highly conjectural dating of Platonic dialogues, notably the *Protagoras*, the *Meno*, and perhaps the *Gorgias*. It is not possible to base any large hypothetical construction upon a document not quite certainly what it purports to be and itself dated in a way calculated to enhance the suspicion that it is a 'school' exercise, and Prof. Taylor is quite ready to admit (p. 119) that no positive result can be reached as to its dependence upon Socratic influence. He has too the excuse that distinguished experts have accepted it at its face value, and that it affords, if genuine, some interesting parallels to certain pieces of Socratic argument, and he has handled its antitheta with skill and judgment. Yet the temptation to use improper weapons in order to force the crowding of the earlier items in the Platonic canon into very narrow limits of date is so strong with advocates for the view of Socrates that Prof. Taylor upholds that it must be regarded with a watchful eye. A notable instance of its insidiousness is the attempt (p. 120) to date the *Republic* 'before Plato's first visit to Sicily' on the faith of a passage in the seventh letter (326 *a*). As to the genuineness of the letter many will surely incline to the measured judgment of Mr. Herbert Richards in his *Platonica*, and Prof. Taylor himself entertains the possibility that the author was 'an immediate disciple' of Plato. If not genuine it proves nothing. If it were genuine it would at most confer considerable probability on the view that a certain sentence 'in eulogy of right philosophy' had already been drafted and in some form published at the date of the letter. However, Prof. Taylor defers fuller discussion of the date of the *Republic* to another opportunity.

The fourth essay on the Phrontisterion is the most brilliant in the book. The Socrates of the *Clouds*, it is maintained, is not, as the conventional view holds, a figure typical of the Sophist or professional rhetoric-teacher, chosen because of the facility for caricature afforded by his physical attributes. 'Wrong Reason' in that play may very probably be identified with the sophist Thrasymachus, but the picture of Socrates is of something quite other, the head, namely, of a definite group of scientific students, typified not by the golden youth of the day, but by Chærephon, with an askêsis or discipline of Pythagorean-Orphic character,—it were much to be desired that what Orphism means at this date and in this regard could be set out for us, not in incidental hints, but in its main characters. At any rate the catchwords of 'the thinking-shop' belong to the jargon of a recognisable school. Its science is, like that of the *Phædo*, of the middle of the fifth century, and notably pre-Protagorean in its point of view. It is not the Socrates of the 'public apostolic dialectics' that is here before us, but the Socrates of the 'philosophic' inner group, with its common table, its characteristic poverty, and its high thinking. And the catastrophe parodies the burning of the Pythagorean schools. Aristophanes is

at one with Plato and not with Xenophon, and Socrates' analogy to the sophists goes no deeper at any time than to the extent indicated in so masterly a fashion in Plato's sketch of 'the sixth sophist' in the *Sophistes*.

The fifth essay deals with the words εἶδος and ἰδέα in pre-Platonic writers and chases them through the historians, the dramatists and the medical *corpus* with astonishing ardour. The aim and result is to make less plausible the conventional view that we start with the class to reach first the class-concept and then the hypostasised class-concept. Prof. Taylor's depreciation of the ἐπακτικοὶ λόγοι of Socrates was motived by the same controversial need, but here he is on surer ground. He would hold that εἶδος never or hardly ever need mean 'class,' a meaning which is a retrojection of Aristotelian associations upon Plato and his foregoers. This piece of lexicography is not easy reading, and Prof. Taylor is sometimes more, sometimes less, happy in dealing with his instances, but the conclusion seems to emerge that the sense, if often geometrical, seems more commonly to be one of almost equivalence to φύσις in its early philosophical use. In the face of Prof. Taylor's cloud of witnesses it is impossible to maintain the traditional formula of a transition from Socratic εἶδος to Platonic ἰδέα. It does not, however, follow that Aristotle does not support the convention.

Obviously these essays do not meet all the difficulties of Prof. Taylor's thesis. The Socrates of the dialogues of search concerned with the definition of the several moral virtues, the Socrates that was wisest because he had at least the wisdom to know that he knew nothing, the Socrates finally whose μαιευτικὴ was to be practised only by one presently barren of notions, is still with us avouched for by Plato himself. And the picture does imply a considerable degree of idealisation on Plato's part elsewhere, however much we insist that the midwife has earlier been fruitful, or that the midwifery is Orphic in its symbolisation. And the question is, what is the degree? That the Platonic Socrates, and specifically the Socrates of the *Phædo*, is the true Socrates, we would fain believe, nay, do believe, but whether the truth is of fact or of idea is still the issue. For the former alternative the brief, that Prof. Taylor has exposed, so far in part only, may be admitted to exhibit a strong case and one not easily to be met.

HERBERT W. BLUNT.

———

John Wesley Young : Lectures on Fundamental Concepts of Algebra and Geometry. Prepared for publication with the co-operation of William Wells Denton ; with a note on "The Growth of Algebraic Symbolism," by Ulysses Grant Mitchell. New York : The Macmillan Company, 1911. Pp. vii, 247. Price 7s. net.

THESE lectures were given at the University of Illinois in the summer of 1909, and profess to be an account of the logical foundations of Algebra and Geometry, where the necessary technical mathematical equipment is reduced to a minimum. Prof. Young gives "a general exposition of the abstract, formal point of view developed during the last few decades, rather than an exhaustive treatment of the details of the investigation". Then he goes on : "The results of recent work on the logical foundations are of vital interest alike to the teachers of mathematics in our secondary schools and colleges and to philosophers and logicians" ; and the lectures are interspersed with digressions on history and teaching.

In the first five lectures our conceptions of space are considered rather informally,[1] and the point of view to be followed in the later, more formal discussion is illustrated in a general way (p. 8). In these introductory lectures it "became apparent that *a purely logical treatment of geometry implies a purely abstract treatment.* Beginning with the observation that it is impossible to give formal definitions of every term, or to give formal proofs of every proposition without becoming involved in a vicious circle, it was seen that the starting-point of any mathematical science must be a set of undefined terms and a set of unproved propositions (assumptions) concerning them. The science then consists of the formal logical implications of the latter" (pp. 58-59). In the final lectures a more systematic discussion of various fundamental concepts of mathematics, beginning with the notions of *class* and *cardinal number*, was given.

That aspect of mathematics with which Prof. Young is chiefly concerned "relates to the fact that mathematics, in particular algebra and geometry, consists of a body of propositions that are *logically connected*". And : "Let it be said at the outset that we shall not be primarily concerned with the psychological genesis of these concepts, not with the manifold and interesting philosophical questions to which they give rise". A *mathematical science* is defined (p. 2) as "any body of propositions arranged according to a sequence of logical deductions ; *i.e.* arranged so that every proposition of the set *after a certain one* is a formal logical consequence of some or all of the propositions that precede it". Thus, Euclid's *Elements* is the first attempt of which we have any record to establish a mathematical science as the term is defined (p. 8). The

[1] In the exposition of non-Euclidean geometry Poincaré is followed closely.

branches of mathematics may be defined (p. 181), but the general question is discussed, as one would expect, only at the close of the lectures (pp. 217-221).

We think that there are difficulties in introducing questions of teaching and history into a logical discussion. Prof. Young says (p. 4) that "Every one interested in the logical side of scientific development is vitally concerned with" questions of teaching; and he tries (p. 7) "to eradicate the all too common feeling that the fundamental conceptions of mathematics are fixed and unalterable for all time". The truth is, of course, that the principles of mathematics *are* unalterable: the process of *discovery* of them may grow, but this is a psychological question. Again, when defining mathematics on page 221, Prof. Young thinks that the *method* is an essential, "for with all our insistence on the formal logical procedure, the important fact must not be lost sight of that formal logic is in only a small minority of cases the method of mathematical discovery. Imagination, geometric intuition, experimentation, analogies sometimes of the vaguest sort, and judicious guessing, these are the instruments continually employed in mathematical research." We might add that, according to this, mathematics would include the science of dietetics.

One more point where logical needs come into conflict with pedagogical needs is in the question of the number of indefinables. "To a mature mind," says Prof. Young on pages 56-57, "the problem of reducing to a minimum the number of undefined terms and of rendering the set of unproved propositions independent is interesting and important; to the mind of the high-school pupil the problem has no meaning. By all means let the number of formally undefined terms and the number of what we may call preliminary propositions (*i.e.*, propositions formally unproved) be large. Let us remember that our primary object is not to teach our pupils to *know* geometry, but rather to lead them to *think* geometry."

There must be undefined terms at the beginning of any mathematical science, says Prof. Young on page 3, neglecting the possibility of their being defined in terms of the entities of logic; and then he misunderstands Mr. Russell's "more or less humorous dictum" (p. 4) or "rather humorous definition" (p. 53): "Mathematics is the science in which we never know what we are talking about, nor whether what we say is true". Prof. Young's interpretation of this definition is: "We do not know what we are talking about, because the things about which we are talking are entirely undefined; and we do not know whether what we say is true, because we cannot know whether the assumptions regarding these undefined terms are true".[1] Mr. Russell was of course referring to the indetermination of the variable. The point of Mr. Russell's definition is evidently missed by Prof. Young, for he states (pp.

[1] Thus Prof. Young apparently only regards those things as known which can be expressed in terms of things which are not known.

53-54, 217) that Russell defined mathematics as the class of all propositions of the form "P implies Q," and does not mention that we have to do with propositional functions and formal implications.

When dealing with the consistency of a body of propositions, Prof. Young (p. 43) rightly remarks that the only test is that which connects with the abstract theory a *concrete representation* of it. "If we can give them a concrete interpretation which satisfies, or appears to satisfy, all our assumptions, then every conclusion that we derive formally from those assumptions will have to be a true statement concerning this concrete interpretation." The words "or appears to satisfy" seem unnecessary. And, on page 224, Prof. Young seems to misunderstand the meaning of "concrete"; for he says that this necessity for exhibiting a concrete application "is a fatal defect in any attempt to place the foundations of mathematics on a purely formal logical basis". The concrete instances are, of course, generally, logical entities.

Prof. Young falls into the usual error of mathematicians of supposing that pure mathematics deals with the symbols in which it is written (*cf.* pp. 43, 104-105, 115). On page 220 Prof. Young hints that abstract symbolism constitutes only the "skeleton" of the science. It would be more appropriate to say that it constitutes the clothes. A slight approach to the true view is given on page 223. The tendency of mathematicians to regard mathematics as dealing with symbols seems to be due to difficulties in the interpretation of the "variable," and this is strikingly illustrated by Prof. Young's treatment on pages 192-193.

Prof. Young's nominalism also appears in the definition of a cardinal number given on page 65; where also he might with advantage have referred to Frege, Weber and Russell.

On page 59, the notion of *class* is taken as primitive. From this follows the shallow treatment of Russell's contradiction on pages 219-220. It is perhaps too much to require of lectures delivered in 1909 that they should take account of work published in 1905 and 1908. It appears to be rather common for mathematicians to think that the traditional foundations of logic can be preserved while the contradictions of the theory of aggregates are simply ruled out of court as "scholastic". A recent example of this was given by Prof. Schoenflies, amid a medley of battle-cries against "resignation," "*Scholasticismus*" and "*Russellismus*".[1]

On page 101, a rational number is stated to be a pair of integers. This pair must be *ordered*, for otherwise we would have 1 : 2 equal to 2 : 1. On page 102, the sign for equality is redefined—an unnecessary and confusing proceeding.

Dedekind did not define irrational numbers as "cuts" (p. 104): this was Weber's definition. Dedekind simply said that they are "defined by cuts". On page 103 "Méray" might be given its

[1] This method is analogous to the unwise procedure of sawing off the branch on which one is sitting.

accent; and the point of the theories of rational numbers, in avoiding a certain logical error, might have been also given (see p. 201). On page 105 rational numbers are added to irrational numbers (relations to classes). On pages 111-113 the "principle of permanence" is discussed at length without any remark about its logical irrelevance.

Neither Grassmann nor Hamilton founded their Algebras on a "purely formal foundation," so that the statement on page 128 is misleading.

We should hardly say, with Prof. Young (p. 71), that the series of real numbers is characterised by its ordinal type; for parts of this series have the same type. There is some confusion about what Prof. Young calls the "postulate of linearity". On page 68 he defines *linearity* in the usual way, and then, on pages 84-86, he arranges the points of a square in an order which is linear (of type θ^2), and says that the series is not linear because it is not what Cantor calls "*zusammenhängend*". On the same grounds, the series formed by removing from the linear series of real numbers those numbers which are greater than $\frac{1}{2}$ and less than $\frac{3}{4}$, which is of type $\theta + \theta$, would not be linear.

On page 81 it should have been mentioned that Cantor used the *binary* system—a point of great importance in connexion with the multiplicative axiom.

There is a confusion between the domain of a function and the function itself on page 193. On page 194 there appear to be three errors: Prof. Young states that Descartes first used the word *function* to mean an integral power of a variable, and that Euler called the functions defined by Bernoulli *analytic functions*. The word *function* was first used by Leibniz; nobody at all seems to have used the word simply to mean an integral power; and it was Lagrange, not Euler, who used the term *analytic function*.

The definition of a limit on pages 202-205 is too narrow (*cf.* p. 208).

On page 81, ω is wrongly used for Aleph-zero. On page 51 the remark, which may be correct, is made that Peano began his logical work in 1880. We cannot verify this: Peano's first logical work was published in 1888. On page 86 it is stated that Cantor's series of papers on the theory of aggregates began in 1872; and yet the reference to the only paper of Cantor's which appeared in that year (*Math. Ann.*, vol. v.) is omitted.

Lecture XVIII. seems good, and many of the lectures seem stimulating. But it cannot be said that they give an adequate picture of modern investigations in logic. Thus Hilbert's work is dealt with (see p. 139) at far greater length than it deserves considering its logical defects.

PHILIP E. B. JOURDAIN.

VII.—NEW BOOKS.

Truth and Reality: an Introduction to the Theory of Knowledge. By J. E. Boodin. Published by the Macmillan Company. Pp. ix, 334.

The present work is mainly epistemological and is to be taken as in some measure introductory to a metaphysical volume called *A Realistic Universe* which the author proposes to publish shortly.

It begins with a genetic account of the individual mind. The author is here concerned to show that the higher stages of mental life constitute genuine leaps and that they cannot be analysed into mere complications of what was present at a lower stage. Interaction with an appropriate environment is needed to produce them and the lower stages must have been present first, but these are conditions and not the full constituents of the higher stages. It is also insisted that we must assume innate capacities to produce these stages under appropriate stimulation, a view which is supposed (rather rashly, I think, though the author might quote in his favour a famous sentence in Gibbon's *Autobiography*) to be denied by Locke and the English school. Owing to the necessity with which all these stages of mental life are evoked by the right stimulus at the right time the author calls them instinctive. As the thought stage is itself instinctive in origin in this sense the author might be accused by a careless reader of trying to produce reflective thought out of instinct. This would be a mistake arising from the fact that the mental reactions typical of the lower stages of mind follow on their stimuli in the same kind of way as all the stages including that of reflective thought follow as wholes on *their* appropriate stimuli.

The author seems to me to use the word 'category' in an unusual sense. He includes Habit and Imitation together with the usual categories, and he says that there are categories at every stage of mind. But surely there is a difference. Habit, *e.g.* is a quality, a characteristic of mind, at certain levels, but space is not a quality or characteristic of a mind at any level. Thus habit is not a category *of* the habitual level in the sense that space is a category of the perceptual level.

Judgment is next discussed. It is an attempt to adjust ourselves to an unsatisfactory or novel situation by grasping reflectively what it has in common with other situations that have already been satisfactorily dealt with. An effort is made to prove that negative judgment must precede positive ones. The argument is that it is only by finding that the situation does not fulfil expectation that we are led to make positive judgments in order to deal effectively with it. This may be very true, but it does not prove that the dissatisfaction has to be expressed by a negative judgment or by a judgment at all. Surely a present pain would be enough.

Two statements that appear to me to contain logical errors must be noted. Prof. Boodin says that inference is only an expansion of judgment. This is to forget the essential peculiarity of inference, *viz.* the principle that if the antecedent of a true hypothetical can be asserted

the consequent can be asserted alone. The other doubtful statement is that all arguments could be rendered syllogistic by the introduction of suitable major premises. Let the author try his hand on '$A > B$, $B > C$, $\therefore A > C$'.

On page 106, where Prof. Boodin discusses consciousness of relations, I find two sentences in a very odd conjunction. 'Is our consciousness of likeness and difference, of side by side . . . reducible to mere sensations in the head or throat? Is the consciousness of the activity of thought in short reducible to kinæsthetic images and sensations?' Surely these two questions are not the same as the phrase 'in short' seems to suggest. Unless 'side by side' and the other relations be activities of thought consciousness of side by side cannot be the same as consciousness of the activity of thought. To ask whether the latter is reducible to kinæsthetic images and emotions is to ask a reasonable question, but the same cannot be said of the first inquiry.

Prof. Boodin now discusses the Axiom of Internal Relations. He holds that some relations as far as we can see are merely external, but that others are not and that there is no logical reason why all should not be internal. I think his discussion would have been greatly improved if he had stated clearly what is meant by the very ambiguous phrase 'making a difference to their terms' which is freely used in arguments on this subject. He seems to hold that the parts of living bodies are internally related. Whether this be true or not must of course depend on what is meant by internal, but I would suggest that the parts of living bodies are perfectly capable of existing for a time at any rate in other relations, and that the fact that when so related they do not form a *living* whole is not more remarkable than the fact that it is only in certain spatial relations that Oxygen and Hydrogen form an explosive whole.

The postulates of thought are next considered. These according to Prof. Boodin are the laws of Identity and Contradiction, the subject-object relation, the law of totality, and the law of finitude. The law of totality means that everything that can be experienced must be capable of making some difference directly or indirectly to some mind. The law of finitude is that nothing that we experience can need an infinitely complex act of thought. This is true as a matter of empirical fact and it was perhaps of value to insist upon it as against Royce, but I see no reason to think that it need apply to all minds. Whether the laws of logic apply to things, Prof. Boodin thinks, is a question that can only be decided by acting upon the assumption that they are true and seeing whether they are verified. I do not think that the matter can really be put in this way. If the laws be true at all they do apply to things and the whole question is: Given that we believe them are they true? And I do not see how any experience could support or refute them because if they were false we could not tell what ought to follow from any hypothesis even from the hypothesis that they are false.

In the latter part of the book the author expresses the very chastened form of Pragmatism, which he holds. It is in fact nothing but the hypothetical method. In insisting that all ontological speculation must follow this method I agree with Prof. Boodin. But the method itself rests on principles which cannot be proved by it without circularity, for which in fact there is no evidence and never can be any. Pragmatism, which the author considers to be a purely epistemological theory, has been blamed, he thinks, for metaphysical speculations which individuals have built upon it. Thus it is not to be identified with humanism or with the view that truth and usefulness coincide. Prof. Boodin's own metaphysical position is realism but not *naïf* realism. It is to be noted that on his definition of idealism the view that *esse = percipere* would be quite compatible

with realism though he himself does not think there is evidence for that axiom. His view seems to be that things really do have sensible qualities in certain contexts, *viz.* when they stand in certain relations to organised bodies with minds. In other contexts they have different qualities. It is hardly fair to criticise this view until it has been more fully stated and defended in Prof. Boodin's coming work. A difficulty that suggests itself is the following: A sees a body from straight in front and it looks circular, B sees it from an angle and it looks elliptical. A says 'the body X in the context *a* is circular' and B says 'the body X in the context *b* is elliptical'. So far there is no contradiction. But unfortunately the body is in both contexts at once and ∴ is at once circular and elliptical for it is the body and not the body-in-such-and-such-a-context to which these qualities are ascribed.

The last chapter is devoted to the reality of religious ideals. The hypothetical method is again employed, but, as it seems to me, employed wrongly. If religious belief be necessary in order to obtain the highest kind of life then the religious ideal must possess in some degree objective reality, we are told. Now this may be a valid argument if certain premises be supplied, but it is not in any case, as the author seems to think, parallel to the testing of a scientific hypothesis by experiment. For the higher life that (we will suppose) is only lived by persons who believe in God may very well not be a result of the truth of the belief *i.e.* of the actual existence of God, but of the belief as a psychical event independent of its truth or falsity.

Finally some misprints are to be noted. On page 16 should not 'evolutionary' be substituted for 'revolutionary'. On page 303 Sir J. J. Thomson has an excrescent p forced into his name.

C. D. Broad.

Maurice the Philosopher (a Dialogue); *or Happiness, Love and the Good.* By Harold P. Cooke, Lecturer in Armstrong College; with an introduction by Dr. F. C. S. Schiller. Cambridge: W. Heffer & Sons, 1912. Pp. xiii, 106.

The chief impression one gets from this book is of the extreme difficulty of the task which Mr. Cooke has set himself. The writing of dialogue in a novel or a play, whether light or serious, is a simple matter compared with that of making the reader interested in the verbal struggles of three young modern philosophers discussing the largest ethical questions, however realistically. In fact, the more realistic the scenes are made, the more one's attention is distracted from the ostensive problems themselves, and drawn towards the logical and rhetorical side of the situation. Mr. Cooke's young graduates—like real ones—are in the first place bent upon turning their phrases well and prevailing over each other, and only in the second place upon the spade-work of inquiry. The result is that what we get is chiefly an object-lesson in the subtler tricks of debate, and in the logic which underlies them. So regarded, however, the realism of the treatment is an advantage. The air of summer-weather leisure in beautiful surroundings agrees very well with the good-tempered complacency of the characters; and it helps to account for the ease with which certain large assumptions, natural to the unifying purpose of philosophy, pass unnoticed at first and yet gradually make their presence felt.

The conception of 'perfect happiness' as capable of existing at all is one of these assumptions—perfect happiness conceived as an intense and *unbroken* feeling. But does our mundane experience of happiness lead us

to suppose that any such state of mind is possible? Happiness, as we know it, is related to desire, and so to dissatisfaction; the removal of dissatisfaction—and therefore always its incomplete removal—seems to be a necessary condition of any happiness we experience in actual life. Again, nothing is more certain than that different men find happiness in different degrees of effort against dissatisfaction. To make no further distinctions than the obvious one between young and old, an old man's happiness would often bore a young man, and a young man's happiness would be too strenuous and precarious for the old. Nor is any one man, old or young, always in the same mood in regard to the joy of effort.

The three characters in the dialogue are, indeed, all of them young, but even amongst them we find some differences; else they would not be disputing. The notion of happiness leads them to consider in a rough general way what modes of life are conducive to happiness—for instance, the solitary life or the social life, philosophy or love. Thus in spite of the inevitable defects of an inquiry professing to be concerned only with ideal perfection, certain interesting questions of a practical kind gradually come into view, such as that of the relation between individual and universal happiness, and of the transient and changing character of love or friendship. It is like real life that a discussion should start with large assumptions arising out of the use of abstract terms, that by degrees and almost by accident these assumptions should run up against the actualities of our experience, and that even at the end their assumptive character should be only partly recognised.

The chapter on "Happiness the Good" contains logical interest of a different kind. Here we are introduced at once to the problem about describing one thing in terms of another—'the Good' as 'the absolutely satisfactory'. And our three young men embark on this problem holding apparently the ordinary loose notions of the nature and purpose of definition. They fail to discriminate between defining a name (or notion) and giving an account of the thing named, and again between explaining the generally accepted average meaning of an unfamiliar word and limiting the meaning of a familiar word as used in a particular assertion. The resulting confusions are what we have all experienced in conversations about any difficult notion. 'Definition,' it is tempting to suppose, is one process only, and consists in stating "the parts that together go to make up a thing". From which it follows that a 'simple' notion—one that "cannot be carved into parts by the instruments of logical dissection"—cannot be defined; a doctrine which is highly satisfactory to the vague assertor, but never to his critic.

The dialogue in this part of the book—especially pages 49-87—will repay a careful study. Though none of the three debaters shows a clear understanding of what is wrong with this view of the nature of definition, it is the character called *Leonard* who is most under its influence, the other two *dramatis personæ* being (as also in the former chapter) agreed enough to combine against him. Leonard, besides appearing to hold that when you find a difficulty in defining a notion—*e.g.* 'Good'—all you have to do is to claim that the notion is simple, openly and expressly maintains that name and notion (in general) are distinct and independent of each other. The others will not have this, but they take a rather circuitous way of disputing it. A fourth character seems needed here, to point out that the distinctness of name from notion exists only so long as we are not concerned with that most important function of definition which consists in explaining the meaning of one man's assertion to another who finds it ambiguous. In an assertion, the words used are the only index to the notions in the assertor's mind—the only index explicit enough to be made a starting-point of definite inquiry. Those who desire an ex-

planation of the meaning of a familiar notion, such as that to which the word 'good' is in English the accepted verbal index, are never asking for the kind of vague general explanation which is all that a dictionary can give. What they are really asking for is the removal of an ambiguity which they have found in the word regarded as used in at least one context. And the quest for a 'definition' which shall fix all possible uses of a word—even if we disregard future ones—has a chance of succeeding only in the case of notions (like 'triangle') into which the endless differences of human personality do not appreciably enter.

This fourth character in the discussion might also find other remarks to make, I imagine he would agree that there is no way of explaining the word 'good' to a person wholly devoid of the notion, any more than the word 'green' can be explained to the colour-blind. But we know that there are totally colour-blind people; do we know that there are any *totally* devoid of the notion 'good'? *Defective* conceptions of it are perhaps common—if we set our standard high—just as common as defective vision of the finer shades of colour. But it seems a rash assumption to make about any human being that the notion of 'good' is wholly strange to him. May not the problem of explaining the notion (as we conceive it) to a person who needs the explanation be regarded rather as that of altering a notion already there than of supplying a sense which is absent?

Again, he might ask Leonard "what use is there in saying that 'good' means 'good' and nothing else?" What information is such a statement supposed to give? It answers no question about the nature of the Good, and removes no possible doubt. It amounts to a claim to use the word X without explaining even in the most sketchy manner your purpose in using it. Certainly, no one can be prevented from doing this, if it pleases him; but he must not be surprised if other people think that he might as well have saved himself the trouble of speaking. All description of X is necessarily in terms of something else, since predication is never more than the statement of an analogy.

However, this fourth character is not present, and the discussion is all the more realistic for his absence. It abounds in good sayings, often epigrammatic; and it rambles into side-paths just as discussions usually do. That its total outcome is a little hazy must be confessed. But in these matters, if anywhere, a hazy view may be justified. It is better, at least, than dogmatising. As Dr. Schiller remarks, in the Introduction which he has contributed to the book, "That every well-conducted reasoning inevitably starts and ends with certainty is the pathetic delusion of Formal Logic, and is manifestly false". In a poem at the end, Mr. Cooke has very suitably used the metre of Omar Khayyam in which to sum up the results of this delicate piece of work.

A. S.

Memories and Studies. By WILLIAM JAMES. London: Longmans, Green & Co. Pp. 411.

This is a collection of seventeen popular addresses and essays which, though they have all been already published, have not previously been very accessible. That they provide delightful reading need hardly be said, for James seems to have been constitutionally incapable of writing or speaking in an uninteresting way. For students of his philosophy the biographical studies, especially those on Agassiz, Thomas Davidson, Herbert Spencer and Frederick Myers, however slight in appearance some of them may be, have a peculiar value as illustrating the way in which James' democratic sympathies are wedded to an ardent belief in

the reality and preciousness of individual initiative. For him the truly democratic system is (or will be!) that which gives the fullest opportunity for human superiority to assert itself, and which suffers cranks gladly, as the unavoidable failures of Nature in her beneficent efforts towards the production of innovating genius. This conviction indeed runs like a connecting thread through these various essays, not by reason of selection on the part of the editor, but simply because it embodies the passionate protest of James' intellectual instinct against the indolent acceptance of the universe as a sort of vast museum-object, which we may contemplate as in a glass case darkly, but which we are strictly forbidden to touch. It is characteristic of James that he is not content to hold this conviction in a merely academic way, but seeks by its means to redeem the academic spirit. He conceives the special function of a university to be, not the production of a sense of our own superiority over the man in the street in realising the final "significance" of the Absolute and the absolute insignificance of man, but the cultivation of the sense for superiority in every walk of life.

"The feeling for a good human job anywhere, the admiration of the really admirable, the disesteem of what is cheap and trashy and impermanent,—this is what we call the critical sense, the sense for ideal values. . . . The sense for human superiority ought, then, to be considered our line, as boring subways is the engineer's line, and the surgeon's is appendicitis" (pp. 314-315, in Essay XIII. on "The Social Value of the College-bred"). By consciously adopting this function the university will take a useful and honourable, instead of a merely dignified, place in the social structure. "We are only beginning in this country, with our extraordinary American reliance on organisation, to see that the alpha and omega in a university is the tone of it, and that this tone is set by human personalities exclusively. The world in fact is only beginning to see that the wealth of a nation consists more than in anything else in the number of superior men that it harbours. In the practical realm it has always recognised this, and known that no price is too high to pay for a great statesman or great captain of industry. But it is equally so in the religious and moral sphere, in the poetic and artistic sphere and in the philosophic and scientific sphere. . . . Who can measure the effects on the national German soul of the splendid series of German poets and German men of learning, most of them academic personages? From the bare economic point of view the importance of geniuses is only beginning to be appreciated. How can we measure the cash-value to France of a Pasteur, to England of a Kelvin, to Germany of an Ostwald, to us here of a Burbank? One main care of every country in the future ought to be to find out who its first-rate thinkers are and to help them. . . . And as the universities are already a sort of agency providentially provided for the detection and encouragement of mental superiority, it would seem as if that one among them that followed this line most successfully would quickliest rise to a position of paramountcy and distinction" (pp. 362-364 in three essays on "The University and the Individual").

Apart from the line of thought above dwelt on, of special interest to philosophers—provided they are not of the sort that not having learnt any psychology have yet learnt to despise it—are Essays VII. ("Frederick Myers' Services to Psychology"), VIII. ("Final Impressions of a Psychical Researcher"), IX. ("On Some Mental Effects of the Earthquake"), XV. ("A Pluralistic Mystic"). Essay IX. will assuredly prove not more interesting to the professed psychologist than to the veriest Gallio of novel-readers. The first news of the great San Francisco earthquake, which James witnessed, caused consternation among his friends, who knew of his unsatisfactory state of health at the time. But James, it

seems, had been having the time of his life. And in his after-reflections on the whole experience, very penetrating is the observation, "Surely the cutting edge of all our usual misfortunes comes from their character of loneliness. We lose our health, our wife or children die, our house burns down, or our money is made away with, and the world goes on rejoicing, leaving us on one side and counting us out from all its business. In California every one, to some degree, was suffering, and one's private miseries were merged in the vast general sum of privation and in the all-absorbing practical problem of general recuperation. The cheerfulness, or, at any rate, the steadfastness of tone, was universal" (pp. 224-225).

Among many interesting points, incidentally touched on in the book, attention may be specially directed to the criticism of "rot" or "pure bosh," as a category (pp. 153 and 191-194); in connexion with fraud in scientific "demonstrations," to the delightful confession of how "I have myself cheated shamelessly" (pp. 181-183); and to the suggestion as to the possibility of a "continuum of cosmic consciousness" (pp. 204-206). It must be noted that with James this last hypothesis functions, not as an excuse for treating the individual consciousness as of no account, but as directing active inquiry into such problems as "What are the conditions of individuation or insulation in this mother-sea?" (p. 205).

HOWARD V. KNOX.

Significs and Language: the Articulate Form of Our Expressive and Interpretive Resources. By V. WELBY. Published by McMillan & Co. Pp. x, 105.

It is depressing to consider that the lamented death of Lady Welby renders the present little book the last contribution that she will be able to make to the new science of Significs at the foundation of which she laboured so enthusiastically and with such faith in the value of its ultimate results.

The work under review consists of a number of short essays written at various times but all connected by a common purpose. That purpose seems to be rather to show the necessity of a reform in our modes of expression and the valuable results that would follow from it than to indicate precisely how such a reform is to be accomplished. The burden of nearly all the essays is the use and abuse of metaphor. Lady Welby did not want to abolish metaphor nor was her ideal a scientific nomenclature like that discussed by Mill in his Logic. Nor would Leibniz's *Scientia Generalis* with the philosophic language and the encyclopædias so happily arranged that rival philosophers had only to appoint umpires, take pencil and paper, and say 'Calculons,' quite coincide with what she desiderated. She recognised that it is quite essential that words should be used in more than one sense and she regarded metaphor if only it were appropriate as a valuable way of expressing meaning. But she complains that most of our common metaphors suggest ideas that were once believed to be true but are now known not to be so. Hence ambiguity, needless labour in deciding how far a metaphor is to be pressed, and practical certainty of erroneous suggestions. When Significs has really been studied we shall no longer leave language to develop haphazard and every writer will take care to use only metaphors that will bear pressing and every reader will know how to appreciate and understand what is thus expressed. But how this happy result is to be accomplished we are not told in the present work.

Lady Welby is especially severe on the metaphor of 'ground,' and has an amusing discussion of what precisely a man means who says: 'I take

my stand on this fact'. One feels that she would have enjoyed Lowell's neat effect produced by taking this metaphor literally :—

> 'Here we stand on the Constitution, by Thunder,
> It's a fact of which there's bushels of proofs.
> How d'you suppose we could trample it under
> If we hadn't it always under our hoofs?'

The reformation desired by Lady Welby was not to extend solely to language. Gesture was also to be systematised and we were to try and regain some of the senses that are present in animals and savage men but only rudimentary in us.

C. D. Broad.

Priests, Philosophers and Prophets. By Thomas Whittaker. London: Adam & Charles Black, 1911.

In the sub-title this book is described as "a dissertation on revealed religion"; and in his preliminary chapter the author classifies religions into natural or spontaneous religions on the one hand, and on the other organised and "revealed" religions, which have been "carried to a more self-conscious stage". His thesis is that "the revealed religions of the West were, from the first, constructed religions," the result, that is, of the working "of a general idea that was the result of reflexion, when the growth of the organised natural religions had been completed from within". Among such Western religions he includes those of Zoroaster, of the Jews, and of Mahomet, as well as Christianity. All these were generated by a "combination of the speculative idea" of ethical monotheism "with a pre-existing national cult by a priestly aristocracy".

There follow chapters on the "Rise of monotheism," on "Greece and philosophical theism," on "The Persians and the Jews," which are well written summaries, but hardly more than that, of current learning on those subjects. By far the best written and most original chapter in the work is the tenth and last entitled "the new era". In it he points out that "theism, with a tendency to pass into pantheism, can really claim a pretty wide consensus. And its earliest and latest phases prove it to be quite detachable from the revealed religions. It is not a residue of these, but, if I am right, the idea under which they were formed, disentangled at last from a factitious union." In the few pages which follow are thrown out some interesting thoughts with regard to the existence in or behind the universe of a moral order; and one regrets that more space was not accorded to these speculations, for the chapters (vi.-viii.) on the Jewish Law and the Prophets, on the Christian era, and on Christianity and Philosophy might very well have been left out, especially the middle one of these in which the author takes his inspiration from the School of Drews, W. B. Smith, and van Manen. It is a disconcerting symptom of the sciolism rampant in connexion with the study of Christian origins that one so well informed in general as Mr. Whittaker should attach any importance to the ludicrous equations and arguments by which Mr. J. M. Robertson has attempted to disprove the historical reality of Jesus of Nazareth.

Fred. C. Conybeare.

Die Soziologischen Theorien. Von Dr. Fausto Squillace. Deutsch von Dr. Rudolf Fisler. Verlag von Dr. Werner Klinkhardt. Leipzig, 1911. Price, M.7.50.

This is a rather carelessly printed translation of a book which is not likely to find many readers in this country. The whole subject of Sociology is here reckoned too suspect for a series of short bibliographical notes upon an endless number of sociological writers, many of whom are quite unknown to fame, to prove generally interesting. Anthropology, on the other hand, which on its social side affords a sort of substitute for Continental sociology amongst British thinkers, is in the present handbook dismissed briefly in a footnote which declares that the existing peoples of the lower culture are, as likely as not, degenerates, and can therefore throw little or no light on the evolution of mankind. Meanwhile, the classification of sociological theories proposed by Dr. Squillace is not without a certain value and significance, inasmuch as it proves that the leading sociologists fall into groups, each of which allies itself to some already constituted science, mechanics, biology, psychology, or what not, and tries to explain human history more or less exclusively in terms of the laws of that single science as extended by analogy. On this showing a sociologist might almost be defined as a historian of one idea. If the hybrid name invented by Comte is to continue to stand for the science of man, at least must the sociology of the future place comprehensiveness of view above the facile simplification which is always to be obtained by ignoring as irrelevant the facts that do not happen to square with your pet theory.

M.

Free Will and Human Responsibility. By H. H. Horne. New York: The Macmillan Company. Pp. xvi, 191.

In the opening paragraph of the fourth chapter the author says that 'in presenting these arguments our purpose is to be succinct, systematic, comprehensive and as convincing as the case allows'. In the first three aspects he is reasonably successful. But there was little need for the hesitation that the fourth implies. His conclusion is only that we are determined in some of our actions but that in others our volition and initiative make a difference to the world. Most deterministe would admit as much and still remain determinists. Indeed, so far as one can see, only materialism and Oriental fatalism are definitely ruled out.

The author's method consciously follows the rules of a debating society. The determinist speaks first, is answered, and then the libertarian has his say. The Chairman opens the debate with a historical sketch and a definition of the issue. The first is interesting but might have been more accurate. It is hard to call Berkeley a subjective idealist without further parley, and very rash to speak of Aristotle as a convinced libertarian on the strength of his definition of προαίρεσις. As to the second it is sufficiently clear but it would have been well if the reader had been told more frequently which of the twelve senses of freedom is used in the different arguments where the word occurs.

J. Laird.

A Beginner's History of Philosophy. By H. E. Cushman. Vol. i: *Ancient and Mediæval Philosophy*, pp. xx, 406. Vol. ii: *Modern Philosophy*, pp. xvii, 377. Boston: Houghton, Mifflin Co., 1911. Price, per volume, $1.60 net.

The author of this work seeks, by the aid of maps, section-headings, systematic and schematic presentation, and occasional summaries and tables, to convince us that "the only 'memory-hooks' upon which the teacher may expect to hang philosophical doctrines are the student's ideas of history, literature, and geography". The point is arguable; but there can be no doubt that Mr. Cushman has produced an interesting text. The first half of the first volume, which treats of the early Greek philosophers, is excellent, both in matter and in form. The transition from ancient to mediæval philosophy is successfully accomplished. In the second volume, which deals with modern philosophy, the course of the exposition is more hurried; only Locke, Leibniz, and Kant receive anything like adequate treatment. The two most serious defects of the volume appear to the reviewer to be the underestimation of Hegel, and the neglect to introduce the student to current philosophical theory; no mention is made of Bergson, Bradley, Green or Royce.

C. A. Ruckmich.

Le Fonctionnisme Universel. Monde Moral: L'ordre des fins et des progrès. Par Henry Lagrésille. Paris: Librairie Fischbacher. Pp. 517.

This book is written by one of the initiated, but we may venture to say, greatly daring, that it can be read with interest, and sometimes with profit, by those who are not of their number. It is the third in the ambitious series called *Le Fonctionnisme Universel*, its two predecessors having already appeared under the titles of *Monde Sensible* and *Monde Psychique* respectively. Morality, the active progress of reason in pursuit of that which alone has true worth, is the fitting culmination of the trilogy.

It is needless, in this place, to do more than sketch the argument. Morality deals with voluntary activity but its real foundation is the effort of Reason towards an impersonal unity, a life in the soul of the world where private differences and discords disappear: 'a universal religion without priests, a superterrestrial socialism among incarnate and discarnate souls'. The ideal of the Good itself is the seal which the Logos has stamped upon man. Reason impels him through love, and love is better understood '*lorsqu'on a fréquenté les désincarnées*'.

The most important concepts of ethics are those of conscious function and of progress. The good life is the internal law of progress in the universe: its reward is to live this life yet more abundantly. Progress is guarded and guaranteed by the inexorable law of Karma and its fruits are seen in the progressive purification of souls during their successive incarnations. Many centuries are needed to make a soul and the rise of a society of worthy souls is just the history of morality.

The book teems with quotations from the great masters of the wisdom of life. Buddha and Christ and the apostles have much to tell us. So have Mrs. Besant and Stainton Moses. The shade of Rousseau makes a trite reflexion, the spirit of Victor Hugo has supplied some commonplace verse.

J. Laird.

Das Erkenntnisproblem in der Philosophie und Wissenschaft der neueren Zeit. IIter Band. 2te durchgeschene Auflage. Von Ernst Cassirer. Berlin: Verlag Bruno Cassirer, 1911. Pp. xv, 832.

The second volume of this revision has followed with commendable promptitude upon the first. It contains the promised and much-needed index extending to sixty-eight pages. There has been some recasting in the direction of the chronological order. Bacon, Gassendi and Hobbes now precede Spinoza and Leibniz in a book to themselves. Of British writers of a non-empirical tendency only Reid and the Scottish school still occupy the original place of the whole group in a sort of appended note to Hume. The rest now find treatment in a special chapter of the book dealing with the progress and culmination of rationalism, a great gain, though it still leaves the position of, for instance, Herbert of Cherbury, chronologically incongruous. The chapter on Gassendi has been rewritten. Dr. Cassirer now takes account of other influences upon Gassendi than Epicurean atomism, a scholastic Aristotelian factor, for example, for which he refers to Pendzig, and the Italian nature-philosophy of the renascence. He gives more attention to Gassendi's views of space, time, and motion in relation to the scientific speculation of the time. In suggesting, as against Riehl, that the relation between Locke and Newton's views of space is not one of direct influence but due to the effect of Gassendi upon both, Dr. Cassirer offers an ingenious way out of what were otherwise a difficult chronological puzzle. It is a pity that he is apparently still not cognisant of the dialectical or anti-Eleatic motive for the atomism of Leucippus and Democritus.

In the larger portion of the volume, there seems to be little or no important change. With its sure touch in regard to the scientific as well as the philosophic forerunners of Kant, it strikes the same note, gives the same impression, of necessity and indispensableness as before. It has, however, been enriched by addition and modification on a minor scale, as, *e.g.*, in the notes on pp. 608 *sq.*, where the criticisms of Nelson on the author's view of the extent of Hume's influence upon Kant manifested in 'Dreams of a Ghostseer' are considered and met, or again in the use made of Haering, *Der Duisburgsche Nachlass und Kants Kritizismus um* 1775. Dr. Cassirer's book may confidently be pressed upon the consideration of all serious students of the philosophic problem as it arises out of the sciences.

H. W. Blunt.

Received also :—

James Seth, *English Philosophers and Schools of Philosophy*, London, J. M. Dent & Sons, Ltd., New York, E. P. Dutton & Co., 1912, pp. xi, 372.

Ernest Belfort Bax, *Problems of Men, Mind, and Morals*, London, Grant Richards, Ltd., 1912, pp. 294.

Vernon Lee and C. Anstruther Thomson, *Beauty and Ugliness and Other Studies in Psychological Æsthetics*, London, John Lane; New York, John Lane Company, 1912, pp. xiii, 376.

William McDougall, M.B., *Psychology, The Study of Behaviour*, London, Williams & Norgate, Henry Holt & Co.; New York, Wm. Briggs; Toronto, R. & T. Washbourne, Ltd., pp. 254.

John Adams, *The Evolution of Educational Theory*, Macmillan & Co., Ltd., London, 1912, pp. vii, 410.

P. Coffey, Ph.D., *The Science of Logic, An Inquiry into the Principles of Accurate Thought and Scientific Method*, Longmans, Green & Co., London, New York, Bombay, and Calcutta, 1912, pp. xx, 445 + vii, 359.

St. George Stock, *English Thought for English Thinkers*, London, Constable & Co., Ltd., 1912, pp. xx, 206.

James Lindsay, *Literary Essays*, William Blackwood & Sons, Edinburgh and London, 1912, pp. xi, 112.

Dr. Albert Moll, *The Sexual Life of the Child*, translated from the German by Dr. Eden Paul, London, George Allan & Co., Ltd., 1912, pp. ix, 339.

Ambika Charan Mitra, *The Elements of Morals*, Calcutta, S. K. Lahiri & Co., 1912, pp. xv, 859.

Hugh S. R. Elliot, *Modern Science and the Illusions of Professor Bergson*, with a Preface by Sir Ray Lankester, K.C.B., F.R.S., Longmans, Green & Co., London, New York, Bombay and Calcutta, 1912, pp. xix, 257.

Judson S. Bury, M.D., *Diseases of the Nervous System*, Manchester, at the University Press, 1912, pp. xx, 778.

E. J. Urwick, *A Philosophy of Social Progress*, Methuen & Co., Ltd., London, pp. xii, 300.

W. H. Pyle, *Outlines of Educational Psychology*, Baltimore, Md., Warwick and York Iric, pp. x, 254, 1911.

James Rowland Angell, *Chapters from Modern Psychology*, Longmans, Green & Co., New York, London, Bombay and Calcutta, 1912, pp. vii, 308.

Herman Harrell Horne, *Free Will and Human Responsibility, A Philosophical Argument*, New York, The Macmillan Company, 1912, pp. xvi, 197.

Charles Kirkland Wheeler, *Critique of Pure Kant or a Real Realism, A Fictitious Idealism, In a Word, The Bubble and Monstrosity of the Kantian Metaphysic*, Boston, The Arakelyan Press, 1911, pp. 298.

John Witherspoon, D.D., LL.D., *Lectures on Moral Philosophy*, edited under the auspices of the American Philosophical Association by Varnum Lansing Collins, Princeton, N.J., Princeton University Press, 1912, xxix, 144.

J. Harris, *The Significance of Existence*, Longmans, Green & Co., London, New York, Bombay and Calcutta, 1911, pp. 324.

A. P. Leland, *The Educational Theory and Practice of T. H. Green*, Teachers' College Contributions to Education, no. 46, New York, 1911, pp. iii, 62.

Antonio Rosmini Serbati, Theodicy, *Essays on Divine Providence*, translated with some omissions from the Milan edition of 1845, Longmans, Green & Co., London, New York, Bombay and Calcutta, 1912, pp. xvii, 475 + vii, 456 + 75.

A. V. C. P. Huizinga, *Authority, The Function of Authority in Life and Its Relation to Legalism in Ethics and Religion*, Boston, Sherman, French & Co., 1911, pp. 270.

James Dunlop Lickley, M.D., *The Nervous System, an Elementary Handbook of the Anatomy and Physiology of the Nervous System, For the Use of Students of Psychology and Neurology*, Longmans, Green & Co., London, New York, Bombay and Calcutta, 1912, pp. xii, 130.

Hector Waylen, *Mountain Pathways, A Study in the Ethics of the Sermon on the Mount*, with a New Translation and Critical Notes, Introductory Letter by F. C. Burkitt, Second Edition, revised and

enlarged, Kegan Paul, Trench, Trübner & Co., Ltd., Broadway House, Carter Lane, E.C., 1912, pp. xiii, 128.

J. Cook Wilson, *Aristotelian Studies, I.—On the Structure of the Seventh Book of the Nicomachean Ethics*, chapters i-x, 1879, reissue (1912), with a Postscript on the authorship of the Parallel Versions, Oxford, at the Clarendon Press, 1912, pp. 103.

Harold A. Wilson, *The Electrical Properties of Flame and of Incandescent Solids*, London, University of London Press, published for the University of London Press Ltd., by Hodder & Stoughton, Warwick Square, E.C., 1912, pp. 118.

J. A. Dell, *The Gateways of Knowledge, An Introduction to the Study of the Senses*, Cambridge, at the University Press, 1912, pp. xii, 171.

H. Stanley Redgrove, *A Mathematical Theory of Spirit, Being an Attempt to Employ Certain Mathematical Principles in the Elucidation of Some Metaphysical Problems*, London, William Rider & Son, Ltd., 164 Aldersgate Street, E.C., 1912, pp. xiii, 125.

I. Husik, *Matter Form in Aristotle: a Rejoinder* [to Dr. N. Neumark], Berlin, Z. Simion, Nf., 1912, pp. 93.

C. H. Lalo, *Introduction à l'Esthétique, les Méthodes de l'Esthétique Beauté Naturelle et Beauté Artistique l'Impressionnisme et le Dogmatisme*, Librairie Arman Colin, Rue de Mézières, 5, Paris, 1912, pp. ix, 339.

Gaston Colle, *Aristote, Traductions et Etudes, Collection*, Publiée par L'institut Supérieur de Philosophie de l'Université de Louvain. *La Métaphysique*, Livre 1er, Traduction et Commentaire, 1912, Louvain, 1 Rue des Flamands, Paris, Alcan, pp. vi, 38 + 171.

Annales de l'Institut Supérieur de Philosophie, Université de Louvain, Tome i, Année 1912, Louvain, 1 Rue des Flamands, Paris, Alcan, pp. vii, 705.

Richard Müller-Freienfels, *Psychologie der Kunst, eine Darstellung der Grundzüge, Die Psychologie des Kunstgeniessens und des Kunstschaffens*, Druck und Verlag von B. G. Teubner, Leipzig, Berlin, 1912, Band i., pp. viii, 232; Band ii., pp. viii, 220.

Branislav Petronievics, *Principien der Metaphysik*, Erster Band, Zweite Abtheilung, *Die Realen Kategorien und die Letzten Principien*, mit 43 Figuren im text, Heidelberg, Carl Winter's Universitätsbuchhandlung, 1912, pp. xxxviii, 570.

Dr. J. Mourly Vold, *Über den Traum, Experimental-psychologische Untersuchungen*, herausgegeben von O. Klemm, Zweiter Band, Leipzig, Verlag von Johann Ambrosius Baron, 1912, pp. vi, 879.

Dr. Adolf Busse, *Aristoteles Über die Seele, Neu übersetzt Philosophische Bibliothek*, Band 4, Leipzig, 1911, Verlag von Felix Meiner, xx, 120.

Max Frischeisen-Köhler, *Wissenschaft und Wirklichkeit*, Leipzig und Berlin, Druck und Verlag von B. G. Teubner, 1912, pp. viii, 476.

Otto Gilbert, *Griechische Religionsphilosophie*, Leipzig, Verlag von Wilhelm Engelmann, 1911, pp. 554.

Ferdinand Tonnies, *Thomas Hobbes der Mann und der Denker*, Zweite, erweiterte Auflage der Schrift, *Hobbes Leben und Lehre* (Stuttgart, 1896), 1912, Ofterwieck Harz und Leipzig, Verlag von U. W. Zickfeldt, pp. xvi, 249.

Otto Liebmann, *Kant und Die Epigonen*, Eine Kritische Abhandlung, Besorgt von Bruno Bauch (Neudrucke seltener philosophischer Werke), Berlin, Verlag von Reuther & Reichard, 1912, pp. xii, 239.

Joseph Petzoldt, *Das Weltproblem vom Standpunkte des Relativistischen Positivismus aus Historisch-Kritisch Dargestellt*, Zweite, Ver-

mehrte Auflage, Leipzig und Berlin, Druck und Verlag von B. G. Teubner, 1912, pp. xii, 210.

O. Külpe, *Psychologie und Medizin*, Sonderdruck aus der *Zeitschrift für Pathopsychologie*, 1 Band, Leipzig, Verlag von Wilhelm Engelmann, 1912, pp. vi, 81.

Richard Pregizer, *Die Politischen Ideen des Karl Follen, Ein Beitrag zur Geschichte des Radikalismus in Deutschland*, Tübingen, Verlag von J. E. B. Mohr (Paul Siebeck), 1912, pp. viii, 97.

Carl Becker, *Vom Geistigen Leben und Schaffen*, Berlin, S.W., 68, Hugo Steinitz Verlag, 1912, pp. 164.

C. Fedeles, *Versuch über Alison's Ästhetik, Darstellung und Kritik, Ein Beitrag zur Entwicklungsgeschichte der englischen Ästhetik im XVIII Jahrhundert*, Munchen, Buchdruckerei B. Heller, 1911, pp. 75.

Dr. V. Rakic, *Gedanken über Erziehung Durch Spiel und Kunst*, Leipzig, Verlag von Wilhelm Engelmann, 1912, pp. 56.

Dr. Richard Oehler, *Nietzsche als Bildner der Persönlichkeit*, Vortrag Gehalten am 16 Oktober, 1910, im Nietzsche-Archiv zu Weimar, Verlegt Bei Felix Meiner in Leipzig, pp. 31.

Lic. Theol. Paul Fiebig, *Die Gleichnisreden Jesu im Lichte der Rabbinischen Gleichnisse des neutestamentlichen Zeitalters, Ein Beitrag zum Streit um die Christusmythe und Eine Widerlegung der Gleichnistheorie Jülichers*, Tübingen, Verlag von J. C. B. Mohr (Paul Siebeck), 1912, pp. xii, 284.

Dr. E. von Düring, *Gesammelte Vorträge*, Tübingen, Verlag von J. C. B. Mohr (Paul Siebeck), 1912, pp. vii, 219.

Karl Vorländer, *Immanuel Kants Leben dargestellt*, 1-3 Tausend, Band 126, Leipzig, Verlag von Felix Meiner, 1911, pp. xi, 223.

Dr. Artur Buchenau, *René Descartes Philosophische Werke*, Übersetzt und erläutert, Vierte Abtheilung, *Über die Leidenschaften der Seele*, Dritte Auflage, Leipzig, 1911, Verlag von Felix Meiner, pp. xxix, 150.

Ferdinand Stöcker, *Das Problem der Methode bei Descartes, Inaugural-Dissertation zur Erlangung der Doktorwürde genehmigt von der Philosophischen Fakultät der Rheinschen Friedrich-Wilhelms-Universität zu Bonn Promoviert am 29th November*, 1911, Bonn, Carl Georgi, Universitäts-Buchdruckerei und Verlag, 1911, pp. 63.

Chr. Joh. Deter, *Abriss der Geschichte der Philosophie*, Zehnte und elfte neu bearbeitete Auflage von Dr. Max Frischeisen-Köhler, Berlin, Verlag von W. Weber, 1912, pp. vi, 192.

Immanuel Kants Werke, Herausgegeben von Ernst Cassirer, Band i., *Vorkritische Schriften*, Herausgegeben von Dr. Artur Buchenau, Verlegt Bei Bruno Cassirer, Berlin, 1912, pp. 541.

Radolfo Mondolfo, *Il Materialismo Storico in Federico Engels*, A. F. Formiggimi, Editore in Genova, 1912, pp. vi, 355.

C. Biuso, *Prolegomeni ad una Psicodinamica*, Milano-Roma-Napoli, Società Editrice Dante Alighieri di Albrighi, Legati & Co., 1912, pp. 174.

VIII.—PHILOSOPHICAL PERIODICALS.

Psychological Review. Vol. xviii., No. 4. **D. Starch.** 'Unconscious Imitation in Handwriting.' [About 100 persons wrote from typewritten copy, and from script of three kinds: vertical, slanting, large. A few cases of intentional imitation or divergence were ruled out. All the other subjects gave evidence of unconscious imitation; if there were no change of inclination, there was change of size; large amount of change in slant meant also large increase in size. Women are more suggestible than men.] **F. L. Wells.** 'A Preliminary Note on the Categories of Association Reactions.' [The examination of some 5,000 reactions yielded a system of classification which has held, with trifling modification, for 6,000 more. The categories recommended are five: egocentric, conditioned by a special subjectivity of attitude to the stimulus; superordinate, or individual-genus reactions; contrast, or associations by opposites; miscellaneous, covering the remainder of the 'internal' associations; and speech-habit.] **H. L. Hollingworth.** 'Judgments of Persuasiveness.' [A set of fifty abstract advertisements, appealing each to some particular interest, instinct, or line of argument, was laid once or twice before thirty women and twenty men, who were asked to arrange them in order of persuasiveness. The judgment of persuasiveness proves to be measurable; it shows characteristic constancies and tendencies from individual to individual and from group to group; moreover, the measurements tally with the results obtained by actual advertising. Men agree more closely in their preferences, and women in their dislikes; women as a group are more homogeneous when judging the strength of personal appeals, men when judging that of social appeals. The final orders of strength of appeal, as judged by random groups of observers, correlate with one another with a constant co-efficient of +·60. Other statistical values are given in the paper.] From the University of California Psychological Laboratory. **J. M. Brewer.** 'xiv. The Psychology of Change: On Some Phases of Minimal Time by Sight.' [Report of experiments with spatially separate lights. The limen of movement is lower than that of discrete sequence. Yet there is a regular reduction of the limen for succession as the visual angle is reduced; and, if we take the most favourable conditions afforded by the experiment, the two limens, of movement and of succession, prove to be 25° and 30° respectively, *i.e.*, are far more closely approximated than in previous work on the subject.] **G. M. Stratton.** 'xv. The Psychology of Change: How is the Perception of Movement Related to that of Succession?' [Report of experiments with spatially juxtaposed lights. Practised observers can, under these conditions, perceive mere succession earlier than motion; lights only 5° apart may be judged successive in 80 per cent. of a series of trials. The two consciousnesses "are intimately conjoined, the judgment of motion being a further specification (more complex, and yet easier) of the judgment of sequence. The judgment of motion has a certain priority, in the sense that it is both more complex and also more readily performed; the judgment of succession, however, has its own priority, inasmuch as it is the simpler, and requires a less lasting stimulation to evoke it." Conscious succession and conscious movement are rather perceptions

than either sensations or judgments; as sensory organisations at a level at which no physical 'thing' has been caught, they may be termed infra-percepts.]

The International Journal of Ethics. Vol. xxii., No. 2, January, 1912. **R. M. MacIver.** 'War and Civilisation.' [When, as in former times, society and state were identical, and each state was isolated and alien to every other, then war was intelligible. To-day the state is less than society, nor is it isolated. Indeed social community in trade, letters and religion extends beyond political boundaries, and gives the real and only possible basis for a true society of civilisation (not cosmopolitan, but keeping each state in its proper sphere). International law follows the same course of development as law within the state, and something may be done, even now, to show a recognition of the changed aspect of affairs.] **Harrold Johnson.** 'The Problem of an Effective Moral Education in Schools.' [The experience of France shows that a lay education in morals referred at first only to generally accepted moral intuitions, but gradually became more obviously rationalistic and anti-religious. It shows also that no non-religious doctrine can yield the necessary sense of obligation to self-sacrifice and the attainment of human perfection. The author agrees with M. Delvolvé that some more religious attitude is involved,—an emotional acceptance of the unity and worth of the universe,—though this, unlike most established religions, must not be at odds with science.] **G. R. S. Mead.** 'The Doctrine of Reincarnation.' [The wider theory of pre-existence has been supposed to throw light on the problem of evil by Origen and others, though their view paid insufficient attention to moral development. Pythagoreanism, Buddhism and Brahmanism treat of the narrower theory of reincarnation and the doctrine of *karma* in the two latter has some bearing on the question. A positive theory is possible. It may be that real struggle can take place only on earth. If the soul is purified at death it may, on its return, be better able to bring the conflict to a successful issue.] **Horace M. Kallen.** 'The Essence of Tragedy.' [Classicism and Romanticism fail to distinguish tragedy from comedy and from horror. The essence of tragedy is a stern conflict between value and value. This theory may be called pragmatic.] **G. A. Barrow.** 'Liberalism and Orthodoxy.' [A half-way house between liberalism and orthodoxy is impossible for theological thought. But the Liberal only is truly orthodox, for he is concerned with the fundamental metaphysical problems which puzzled the Greeks. Later heresy, through the influence of the Roman mind, referred to questions of morals and Church government only.] Book Reviews. List of books received.—Vol. xxii., No 3, April, 1912. **The Bishop of Tasmania.** 'A Plea for an Honest Casuistry.' [The moral law is no fixed and rigid set of fiats arranged in tabular form and claiming literal obedience. Therefore casuistry is essential. As long as man is in the making, as long as there are discrepancies in the estimation of values, as long as special professions require special codes, or manners or 'accommodation' can be justified, so long is there need for casuistry.] **A. T. Cadoux.** 'The Implications of the Golden Rule.' [Objections raised to the universality of the golden rule by Kant, Sidgwick and others are either unfounded or due to a misunderstanding of its real character. Though it seems to start with apparently given desires it leads to a modification of these desires, (1) by way of increase, (2) by way of subordination to a complete system.] **Sitanath Tattvabhushan.** 'Ethical Science among the Hindus.' [The sacred writings of the Hindus really contain an ethical system. As against hedonism they maintain that the only true bliss is to be found in the Absolute. We find in the writings of Jaimini substantially the same stage of ethical thought as in

those of Kant. But, unlike Kant, the Gita doctrine of 'nishkama karma' while extolling a purified desire, does not eradicate desire altogether.] **E. W. Hirst.** 'Morality as Inter-Personal.' [The single thought cannot be moral nor can the isolated self. Practice requires co-ordination of mind and also a relation to others. Genetic and other considerations lead us to seek the ethical end through the consideration of Einfühlung.] **E. M. White.** 'The Woman-Soul.' [A comparison of the mental characteristics and character of man and woman. Woman's long bondage has resulted in the acquisition of graces of tenderness and quick intuition which she can never lose. Infants are really nearer to the type of humanity than adults, and women are liker infants than men. Therefore, . . . ?] **Henry Neumann.** 'Some Misconceptions of Moral Education.' [Moral education in schools, if the term be properly understood and not confused with ethical science, is useful, indeed necessary. Children do think about principles, and should be taught to think a little, (but not too much) more. The tone of the school is raised if the moral emotions are strengthened, as they may be by citing noble examples.] Book Reviews. List of books received.

Journal of Philosophy, Psychology and Scientific Methods. viii., 21. **A. Mitchell.** 'The Logical Implication of Matter in the Definition of Consciousness.' ["Consciousness is the inversion or reciprocal aspect of organic activity, virtual, in distinction from externalised or real, activity."] **E. G. Spaulding,** ('Reply'), and **J. Dewey.** 'Joint Discussion with Articles of Agreement and Disagreement.' [S. disclaims charge of deciding questions of fact by manipulating concepts and asks for a decisive proof that knowing alters its objects. In the joint discussion, which is far from lucid, D. insists that 'subsistents' are only the existents referred to modified, but agrees that 'propositions' 'state the truth' about existents or subsistents. As this definition abstracts from the possible falsity of propositions and so confines itself to formal 'truth,' it would seem that D. had tacitly conceded the right to discuss the 'truth' of propositions without reference to their application.]—viii., 22. **A. O. Lovejoy.** 'Reflections of a Temporalist on the New Realism.' [A well-written paper showing that as the new realism cannot admit that "any perception can be false or illusory at the time when it occurs," it cannot explain what is meant by hallucination, illusion, error or "purely subjective existence," which are, in fact, the phenomena which engender common-sense realism.] **E. K. Strong.** 'Application of the "Order of Merit Method" to Advertising.' [Finds that women are more attracted by irrelevant 'cuts,' while men prefer 'copy ads.'] **M. W. Calkins.** 'Defective Logic in the Discussion of Religious Experience.' [Criticises E. S. Ames's *Psychology of Religious Experience.*] —viii., 23. **H. M. Kallen.** 'Pragmatism and Its "Principles".' [Starting as a review of Bawden's books, which he repudiates as Pragmatism, K.'s article develops into a discussion of the interrelations of the genuine types, James's, Schiller's, Dewey's and Santayana's. Pragmatism is, however, conceived not as a logic but as a metaphysic= "reality is flux".]—viii., 24. **H. H. Bawden.** 'Art and Industry.' ["Beauty is only a higher usefulness—utility seen at arm's length."] **S. N. Patten.** 'Pragmatism and Social Science.' ["Pragmatism, sociology, economics and history are not distinct sciences, but merely different ways of looking at the same facts. . . . They all must accept consequences as the ultimate test of truth, and these consequences are measured in 'the same broad field of social endeavour'."] **A. O. Lovejoy.** 'Existence and Formal Logic.' [Points out, against Marvin (viii., 18), that Formal Logic has nothing to say about existence.]—viii., 25.

R. B. Perry. 'Notes on the Philosophy of Henri Bergson.—I.' [Regards it as the most anti-intellectualist of pragmatisms, but as a "vicious immediatism".] **W. B. Pitkin.** 'Philosophy and the Flatfish.' [What the former could learn from the latter's capacity to adapt themselves to the patterns of their backgrounds.] **H. L. Hollingworth.** 'Vicarious Functioning of Irrelevant Imagery.' [As vehicles of relational feelings.] —viii., 26. 'Report of the Committee on Definitions of the American Philosophical Association.' [On the relation of objects to consciousness in sense-perception.] **C. Ladd-Franklin.** 'The Foundations of Philosophy: Explicit Primitives.' [*I.e.*, indefinables should be avowed.] **R. B. Perry.** 'Notes on the Philosophy of Henri Bergson.—II.' [On his indeterminism and dynamism: argues that to assume in man "an indeterminate, incalculable and creative power to do . . . destroys the originality and distinction of pragmatism and allies it with romanticism, mysticism and irrationalism."]—ix., 1. **J. E. Boodin.** 'Do Things Exist?' [Yes, as "the sensible embodiments of purposes," as "energies which we must recognise as belonging to a space context of their own".] **E. A. Singer.** 'Consciousness and Behaviour.' [A reply to Dickinson Miller in viii., 12.] **J. Dewey.** 'A Reply to Prof. McGilvary's Questions' (in viii., 17). [They all rest on misapprehensions.]—ix., 2. **J. W. Hudson.** 'Aims and Methods of Introduction Courses.' [In Philosophy; a questionnaire. There is no agreement among teachers.] **W. P. Montague.** 'The New Realism and the Old.' ["The new realism is almost identical with naïve realism" but its "first and greatest problem is to amend" it so as "to make it compatible with the universal phenomenon of error and with the mechanism of perception"—but here comes an abrupt stop.] **J. Pikler.** 'Opposition as Condition of Consciousness.' [Replies to a review.]—ix., 3. **J. W. Bridges.** 'Doctrine of Specific Nerve Energies.' [Criticises McDougall's form of the doctrine on Wundtian lines.] **E. L. Hicks.** 'Is Inversion a Valid Inference?' [No, because it goes beyond the evidence, and involves illicit process.] **H. L. Hollingworth.** 'New York Branch of the American Psychological Association.'—ix., 4. **J. Royce.** 'On Definitions and Debates.' [Criticises the Committee's definitions as to 'the Relations of Consciousness and Object in Sense-Perception,' *cf.* viii., 26. It is shown that they ruled out "various mystics, scholastics, Kantians, idealists, modern realists and pragmatists": but what is proved is probably only that the Committee was not representative rather than that definitions are impossible in philosophy.] **H. A. Overstreet.** 'Eleventh Annual Meeting of the American Philosophical Association.'—ix., 5. **N. K. Smith.** 'The Problem of Knowledge.' [Demands that a satisfactory theory of knowledge shall "be at once realistic, phenomenalistic and individualistic," and ends by denying, against Dewey, that the knowing process can be an event, that it is not unique and non-natural, and that it can be described merely from the standpoint of man's animal organism.] **J. E. Russell.** 'Bergson's Anti-Intellectualism.' [R. B. Perry's criticisms in viii., 25, 26, are inconclusive.]—ix., 6. **B. H. Bode.** 'The Concept of Immediacy.' ["One of the chief merits of the 'Critique of Pure Reason' is that it is a *reductio ad absurdum* of its premises;" it starts with relationless sensations, invokes a transcendental synthesis to explain them, and concludes that they are fictions. The same reasoning is shown to persist in Bradley, Bosanquet and Royce, but the solution of the problem lies in functionalism, not in objective idealism.] **D. Drake.** 'What kind of Realism?' [Realists should realise that they have to solve the problem of *how* our perceptions are related to the real things and to the brain-changes.] **W. Fite.** 'Explicit Primitives: a Reply to Mrs. Franklin.' [*Cf.* viii., 26. Shows that "an explicit primitive is a contradiction in terms".]—ix., 7. **J. K. Hart.** 'The Relations of

Individual and Experimental Psychology to Social Psychology.' [Experimental psychology originated in the attempts of astronomers to improve their observations by correcting the 'personal equation': but "if psychology is to become a real science in its own right it must become social," and get the concrete social self as its object of knowledge.] **M. E. Haggerty.** 'The Twentieth Meeting of the American Psychological Association.' [Mentions at the end that the International Congress for 1913 is abandoned.]—ix., 8. **K. Schmidt.** 'Studies in the Structure of Systems. I. The Separation of Problems.' [Insists on the importance of doing this, but does not explain how real problems are to be distinguished from bogus.] **R. Montgomery.** 'A Simple Method for the Study of Entoptic Phenomena.' [By "small silver beads strung on a wire in a spectacle frame".] **E. A. Singer.** 'On Mind as an Observable Object.' [Replies to criticisms of the paper in viii., 7.]

ZEITSCHRIFT FÜR PSYCHOLOGIE. Bd. lix., Heft 1 und 2. **M. Levy-Suhl.** 'Studien über die experimentelle Beeinflussung des Vorstellungsverlaufs, dritter Teil.' [Continued from vols. xlii., xlv. The author's method is indicated in MIND, 1907, 158; his classification of reactions *ibid.*, 1908, 296. The forty-four patients whose examination is here reported are grouped, according to its results, into four classes: Group i. shows a reactive attitude like that of the normal subject; Group ii. a general indifferent hyperprosexia (by this term Ziehen understands a pathological condition in which the attention is easily caught and as easily diverted, a combination of 'hypervigilancy' with 'hypotenacity'); Group iii. a selective hyperprosexia; and Group iv. a hypervigilant reaction with contamination (acceptance of the stimulus-word even if it reduces the current utterance to the merest nonsense) and dissociation (no associative connexion can be made out between the stimulus and the reaction evoked by it). These groups agree in the main with those of clinical diagnosis: thus the sixteen members of Group iii. all fall under the rubric of paranoia; the eleven typical members of Group ii. under those of mania (10) and of paranoia transitional to mania (1). The writer suggests, cautiously, that the exceptions may be due to faulty diagnosis, and that his psychological results may be of value for future prognosis and diagnosis; control experiments by others are needed.] **W. Sternberg.** 'Das Appetitproblem in der Physiologie und in der Psychologie.' [The importance of appetite, and the problem which it sets to physiology and psychology, have been misjudged and misunderstood by representatives of these and of other sciences. The attraction of appetite is not a chemical but a physical or mechanical force; the animal moves toward the appetising object, and responds to it specifically by movements of the mouth-parts (tongue, opening of mouth, seizing with teeth). The counterpart of this attraction is the repulsion of nausea. Sweets and weak bitters are appetising; bitters and intensive sweets are nauseating; the change in the effect of sweet, due to change in intensity, explains the many courses of our meals. Experiment is not adequate to the problem of appetite; recourse must also be had to racial experience, as embodied in history and language.] **O. Selz.** 'Willensakt und Temperament; eine Erwiderung auf N. Achs Widerlegung.' Literaturbericht.—Bd. lix., Heft 3. **C. Stumpf.** 'Differenztöne und Konsonanz, II.' [Reply to Krueger and further criticism: the first paper appeared in vol. xxxix., Stumpf's own observations in lv.] **J. Dauber.** 'Ueber bevorzugte Assoziationem und verwandte Phänomene.' [It is known that, in experiments upon verbal association, a given stimulus-word may call out the same reaction-word from several reactors (preferred association). The writer shows that, similarly, different stimulus-words may call out the same reaction-word from the single reactor (repeated association). There is a direct relation

between preferred and repeated association, and also between both of these phenomena and the relative frequency of occurrence of the reaction-words in ordinary speech. Again, the oftener the stimulus-word occurs in ordinary speech, the larger is the number of (different) reaction-words that it calls out, and the larger also the number of (different) preferred associates; the most preferred associates are fewer (given by a smaller number of reactors) than is the case with stimuli of less frequent occurrence. In connexion with Jung's experiments on reproduction, the writer notes two points of interest: (1) isolated associations are more readily forgotten than preferred; and as isolated associations have also the longer reaction-time, both of Jung's distinguishing marks of a 'complex' are primarily conditioned by the phenomenon of preference; and (2) the oftener the stimulus-word occurs in ordinary speech, the poorer is the reproduction; here, too, therefore, is a fact that must be taken into account before Jung's interpretation is accepted. Experiments with nonsense syllables confirm and extend the results obtained in regard to preference. There is a strong tendency to reply to the stimulus by a real word, even if the reactor is definitely instructed to reply by utterance of a meaningless syllable.] Literaturbericht. —Bd. lix., Heft 4. **E. Huber.** 'Assoziations-versuche an Soldaten.' [A study of the verbal associations of 159 soldiers, undertaken partly as a complement to Reinhold's mass-experiments with school girls (MIND, xix, 452), partly in order to determine the influence of training and environment. The writer concludes that, in working out a comprehensive dictionary of associations, account must be taken of the details of environment, of the time spent in it, and of the educational status of the reactors. The soldiers give, for all the stimuli employed, fewer 'preferred' or 'favoured' associations than the schoolgirls; this result is connected with another, *viz.*, that the soldiers, as relatively uneducated persons, give a relatively large number of 'internal' associations; 'external' associations are more often 'favoured' because they are likely to be effected more quickly and without the interpolation of conscious processes between stimulus and response. On the average, the soldiers reply oftener by adjectives and by a definition of the stimulus than do the schoolgirls.] Literaturbericht.—Bd. lix., Heft 5 und 6. **P. Stumpf.** 'Ueber die Abhängigkeit der visuellen Bewegungsempfindung und ihres negativen Nachbildes von den Reizvorgängen auf der Netzhaut: Vorläufige Mitteilung.' [Describes, in condensed form, the method and apparatus which have led the author to the formulation of general principles. (1) If, within certain spatial and temporal limits, the retina is subjected to two changes of excitation of the same kind (*e.g.*, to two paired stimuli whose components have the same spatial and temporal order black-white, black-white), then there arises primarily the sensation of a movement in the direction of the succession (towards white), and secondarily an after-image of movement in the opposite direction (towards black). (2) If conditions are so arranged that a given area of the retina should, by the first law, furnish movement-sensations of different directions at one and the same time, then there arises a movement-sensation in the direction of the resultant, and an after-image in the opposite direction. (3) If paired stimuli (colours or lights) are equated in luminosity, there is no tendency to movement-sensation. If the repeated pairs are changed in kind (from black-white, black-white to black-white, white-black), the sensation of movement reverses in direction.] **W. Koehler,** mit Uterstützung von **H. C. Warren.** 'Bibliographie der deutschen und ausländischen Literatur des Jahres 1910, über Psychologie, ihre Hilfswissenschaften und Grenzgebiete.' [2548 titles, as against 3186 of the corresponding *Index*, and 3132 of the bibliography for 1909.]

"Scientia." Revista di Scienza. Vol. ix., Anno v., 1911. No. xviii. **F. Enriques.** 'Il problema della realità.' [Inaugural address delivered before the fourth International Congress of Philosophy held at Bologna in 1911.] **H. Poincaré.** 'L'évolution des lois.' [Reflexions on the question as to whether the laws of Nature themselves can change in time. The question as to whether the laws considered as existing outside the mind which creates them or which observes them are constant in themselves is not only insoluble, but meaningless.] **G. Celoria.** 'L'operadi Giovanni Schiaparelli.' **L. De Marchi.** 'Nuove teorie sulle canse dell' era glaciale.' **E. S. Russell.** 'Vitalism.' [One may be an adherent of Neo-Vitalism, or of the mechanistic theory; but there is a third attitude possible: one may concede the universal validity of physical and chemical laws and yet hold that the laws of biology cannot be reduced to their level. "All vital activities can conceivably be analysed into a particular combination in space and time of processes each of which is explicable by physical and chemical laws; but it does not follow that the combination of these processes is itself explained by the laws which explain each single process."] **Ch. S. Sherrington.** 'The *rôle* of reflex inhibition.' [A physiological article.] **W. Ostwald.** 'Der Wille und seine physische Grundlegung.' [An application of the science of Energetics.] **I. Fisher.** 'The "Impatience Theory" of Interest: a Study of the Causes determining the Rate of Interest.' [The rate of interest is not a narrow technical phenomenon, but touches the daily life of us all, and *impatience* is fundamental. The theory is that more fully contained in the author's book, *The Rate of Interest* (New York and London, 1907).] **A. Meillet.** 'Différenciation et unification dans les langues.' **S. Arrhenius.** 'Über den Ursprung des Gestirnkultus.' [Discussion of why, in all higher religions, the gods are regarded as being of "celestial" origin; this fact is certainly connected with the widely-spread worship of the heavenly bodies.] **A. Fraenckel.** 'Le calcul de la date de Pâques.' Book Reviews. General Reviews (Geology, Biology, Economy). Review of Reviews. Chronicle.—No. xix. **N. Herz.** 'Philosophische Konzeption und mathematische Analyse in der Weltbetrachtung.' [Philosophical conception and mathematical analysis are both essential to science, and, for progress, must work together harmoniously.] **P. Langevin.** 'L'évolution de l'espace et du temps.' [Our fundamental notions of space and time have evolved, and have gradually adapted themselves to new experiences. Hitherto, our space and time have been those required by theoretical mechanics, and, to the new and powerful synthesis represented by the electromagnetic theory of physical phenomena, correspond a different time and space.] **G. Bruri.** 'L'opera di J. H. van't Hoff.' [Of chemical and physico-chemical interest.] **J. Costantin.** 'Les progrès de la culture des fleurs et leur importance pour les théories transformistes.' [Scientific aspects of the culture of orchids.] **R. Pearl.** 'Biometric Ideas and Methods in Biology: Their Significance and Limitations.' [Biometry, founded by Karl Pearson in 1895, is an exceedingly valuable method of research, but the early workers in it sometimes misconceived what mathematical methods could do, mistook it for a school of biological philosophy, and did superficial work. The author's object is to help along a better understanding of and greater sympathy towards biometric work.] **P. K. v. Engelmeyer.** 'Heurologischer Wert der technischen Erfindung.' [Technical invention is much more accessible to heurological analysis than works of art.] **M. Hœrnes.** 'Die ältesten Formen der menschlichen-Behausung und ihr Zusammenhang mit der allgemeinen Kulturentwicklung.' **S. Perozzi.** 'Socialismo giuridico.' **F. Enriques.** 'La philosophie de Giovanni Vailati.' Book reviews. General reviews (Astronomy, Sociology). Review of reviews. Chronicle.

IX.—NOTES.

Dear Sir,—

In No. 82 of Mind, Mr. J. J. Maxwell has stated that, in my review of Prof. Natorp's book in No. 80 of Mind, I ignored the main purpose of the book which he believed to contain: "The first real attempt to rest mathematics on a logical basis, broad enough to obviate the necessity of all 'generalisations of number' so that negative and fractional numbers, the irrational, the transfinite and the imaginary are all, as it were, implicated from the beginning"; and: "There is no hint of this attempt, to say nothing of any estimate of its success or failure, in the review in question. The writer confines himself largely to the historical and critical discussions which serve merely to illustrate the main theses of the work, and a reader of the review unacquainted with the original might be forgiven if he mistook these digressions for the substantive part of the book."

The attempt mentioned was, it seems to me, first made by Frege in 1884, and has since often been made by other mathematicians who busy themselves with the principles of mathematics. The parts of my review which Mr. Maxwell criticises are concerned with pointing out that Prof. Natorp's quite misunderstood Frege.

Mr. Maxwell seems to maintain that Prof. Natorp's general position does not suggest that he does not, on page 120, object to Frege's definition of identity on the ground that the *word* "two" occurs in it—a defect in language, which is not present in logical symbolism. I need only remark that Natorp, in the passage referred to, gives the number-words all the emphasis of marks of exclamation and spaced type. Here is the passage: "Man könnte etwa sagen: die Zahleinheit sei die Umfangsbestimmung, welche der Inhaltsbestimmung der Identität entspricht. In der bei den Schullogikern beliebten graphischen Darstellung begrifflicher Verhältnisse wird der Fall der Identität zweier (!) Begriffe veranschaulicht durch das Zusammenfallen zweier (!) Kreise, durch das sie in der Tat—vielmehr einer werden. Interessant ist hierbei, dass von der Zweiheit ausgegangen, die (der Identität entsprechende) Einheit also als Grenzfall der verschwindenden Zweiheit (die eben mit der Verschiedenheit verschwindet) aufgestellt wird. Im Grunde ist es bei Frege dasselbe: die *zwei* Dinge *a* and *b* werden der Zahl nach eines im Falle ihrer Identität. Frege merkt gar nicht, dass er also die Zweiheit voraussetzt und die Einheit zu einem besonderen Fall, einem Grenzfall der Zweiheit macht; während er sich sonst gewiss darüber klar ist, dass vielmehr die Zweiheit nur unter Voraussetzung der Einheit aufgestellt werden kann."

It may be added that Couturat expressly abandoned, in his *Principes des Mathématiques* (Paris, 1905, pp. vii, 26-27, etc.), the position that he had formerly held of the notion of *unity* being a preliminary to arithmetic.

I cannot see that Prof. Natorp has proved that Frege is a nominalist,

and I certainly think that Natorp's saying that Frege is so would rouse any one's suspicions, considering Frege's often-expressed opinions on this point, in the way complained of by Mr. Maxwell. Of course a conclusion would be unsafe: obviously I did not mean it to be anything more than a guess. If this guess had turned out to be wrong it would have been negligible; as it was right it is "unkind".

I cannot agree that "the number is continuous". For: (1) there is more than one number; (2) no number is continuous; (3) the series of integer numbers is not continuous, nor is an integer or a rational even part of a series which is continuous. The series of what are called "real numbers" is continuous; but real numbers are derivative, though, in a sense, "implicated from the beginning".

Prof. Natorp was not the first investigator in the direction indicated by Mr. Maxwell. He has printed mis-statements about the well-grounded work of predecessors who seem to have reached what Natorp perhaps was aiming at. That Natorp's whole position may be inconsistent with the statements to which I have referred in my review (and I have verified the accuracy of those references), I admit may be the case. But, unfortunately, I had no other means of forming an opinion on Prof. Natorp's book than by reading it and trying to understand it.

Yours faithfully,

PHILIP E. B. JOURDAIN.

THE LODGE, GIRTON, CAMBRIDGE,
May 16, 1912.

PRAGMATISM AND THE DICTUM "ALL TRUTHS WORK".

On more than one occasion Dr. Schiller has protested against the assumption, made by critics of the pragmatic theory of truth, that the dictum "All truths work" can be converted *simpliciter* into "All that works is true". His latest and most explicit rejection of this—to use his own phrase—"grotesque conversion" was made in his paper on "Error," read at the International Congress of Philosophy at Bologna in May, 1911, and subsequently before the Aristotelian Society.[1]

In reply to this protest it may be noted:—

(1) That the contention shows that pragmatism entirely fails to provide any criterion for distinguishing "truth" from "error". But it is the peculiar claim of pragmatism that it does provide such a criterion.

(2) That the whole significance of pragmatism as a theory of truth, and its claim to both novelty and importance, rests upon the possibility of this conversion. That "all truths work," *i.e.*, are satisfactory from some point of view, no one would contest. The difficulty is to distinguish these "truths" from those other "truth-claims" which satisfy some purpose, but are found not to be "true". If, from the fact that "all truths work," it does *not* follow that "all that works is true," then "working" can *not* be regarded as a *test* of truth. Pragmatism, therefore, fails just where its claims are greatest.

(3) That this conversion is (*a*) repeatedly made by James, and (*b*) assumed by Dr. Schiller.

(*a*) In "Pragmatism" (in Lecture VI., dealing with the "notion of truth") James says "it is useful because it is true" and "it is true because it is useful" "mean exactly the same thing, namely, that here is an idea that gets fulfilled and can be verified. True is the name for

[1] It is now published in the *Proceedings of the Aristotelian Society*, N.S., xi

whatever idea starts the verification-process, useful is the name for its completed function in experience" (p. 204). It is true that a distinction has just been drawn between relevant ideas, which are of immediate use, and *irrelevant but true* ideas which are kept in "cold storage" until such time as they become "practically relevant to one of our emergencies". Only when they do this, does James seem here to equate the useful and the true, but he is dangerously near the border-line, and in *The Meaning of Truth* we find him explicitly stating the "grotesque conversion," namely, "what works is true and represents a reality, for the individual for whom it works" (p. 243).

(*b*) The conversion is assumed throughout by Dr. Schiller, as, indeed, we should expect, since it is the very essence of the pragmatist position. It is implied even in the paper on "Error," for Dr. Schiller says, "Truth-claims which have worked badly are condemned as 'errors,' *even as those which have worked well are accepted as 'truths'*".[1]

It is not surprising, then, that critics of pragmatism have assumed this conversion as a *sine qua non* of the pragmatic theory of truth. Without it the pragmatic theory is both useless and irrelevant, or at best a truism; with it, according to Dr. Schiller's own showing, it is "grotesque".

L. S. Stebbing.

To the Editor of "Mind".

May I repair an omission which I made in speaking at the Cambridge meeting of the Aristotelian Society yesterday? Dr. Nunn, who could not be present, had informed me that he thought my paper treated him as an interactionist holding that mind produces energy, in excess of the energy supplied to the body by the recognised physical channels. He had asked me to point out that his view is quite different, *viz.*, that some of the bodily energy may at a given moment be found in a physical form.

I had meant to explain this at the meeting, and regret that I forgot to do so. I had not meant to attribute to him the view he repudiates; but very likely my paper was not clear.

B. Bosanquet.

June 2, 1912.

[1] *Loc. cit.*, p. 152. Italics mine.

MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY

I.—SHADWORTH HOLLWAY HODGSON.

By H. Wildon Carr.

English philosophy has recently lost in Mr. Shadworth Hodgson one of its most able and distinguished representatives. He died on the 13th of June last, at his home in Conduit Street, London, after an illness of a few months' duration, at the age of seventy-nine. He was a remarkable man, loved and honoured for his devotion to philosophy by all who knew him, even by those to whom his special teaching made no appeal. Secluded and methodical in his life and work, entirely devoted to and absorbed in his one chosen task, he was yet open and free to all who cared for philosophy, however divergent their methods and aims and ideals from his own. His writings cover a period of close on half a century, and from the first established his position as an original thinker of great intellectual power. He was a founder and first President of the Aristotelian Society, and it is in connexion with that Society that he was best known and that his personal influence was greatest. The Society was founded in 1880, and Shadworth Hodgson was President for fourteen years, during which time, and afterwards up to the time of his last illness, he regularly attended its meetings and took part in its discussions. His literary work and indeed his whole life was devoted to the effort to establish and compel the recognition of philosophy, which to him was a pure science of metaphysics, a necessary branch of human knowledge. He delighted to be called, and so always described himself, a metaphysician.

Shadworth Hodgson's first philosophical work was entitled *Time and Space ; A Metaphysical Essay*, published in

1865. In 1870, he published an ethical Treatise in two volumes, *The Theory of Practice.* This was followed by *The Philosophy of Reflection*, also in two volumes, in 1878. He also published in 1880, the year in which he joined the Aristotelian Society, a volume of essays entitled *Outcast Essays and Verse Translations.* The discussions in which from that time onward he regularly took part, had this effect on his work, that they convinced him that his published writings did not fully meet the difficulties that naturally occur to those who study the problem, and that it was necessary to restate his principles and present his method in a new form, and the result was the *Metaphysic of Experience* which he published in 1898. This great work represented the labour of twenty years and attempted to set forth a complete system of philosophy. It is in four volumes, but no part was published until the whole was complete. He wished it to be judged as a whole, having designed it as a final and complete expression of his philosophy. He was disappointed with its reception, but he was not discouraged, and as he never lost confidence in his principle so he was always ready to re-present it in relation to whatever new movement might be prevalent in philosophy. His disappointment never made him bitter towards, or impatient of, other and antagonistic schools of philosophy. Indeed he rejoiced in every evidence of new interest in philosophy, however little his own sympathy with the form it took, for to him Philosophy was one, more and greater than individual philosophers. Almost his last words to the present writer were the expression of his recognition that there was work still to be done, that the new movement called for a new re-thinking of his principle in the light of a new problem. He realised with the regret of a good fighter that the work was not for him.

The intellectual interest which determined Shadworth Hodgson in the choice of metaphysics as a literary pursuit was the influence on him of the writings of Coleridge. He did not know Coleridge personally, but he tells us in the introduction to the *Philosophy of Reflection* that to his writings more than to any other source he owes the direction that his own studies took. The *Philosophy of Reflection* is dedicated "To Samuel Taylor Coleridge, my father in philosophy, not seen but beloved," and the title of the book is taken from that author's *Aids to Reflection.*

The philosophical work that seems to have given Shadworth Hodgson his point of departure was Ferrier's *Institutes of Metaphysics*, at the time that he began to write, the standard modern work on the subject. He preserved through-

out his life his admiration and appreciation of this book, to which he continually alluded and which he was always recommending as the best introduction he knew to the pure science of metaphysics. It seemed to him however that a fundamental error vitiated Ferrier's First Proposition, that which lay at the basis of his philosophical system. It contained an assumption, an assumption that it became the main guiding purpose of Shadworth Hodgson's analysis to unmask and avoid wherever it met him—the assumption of agency in the conscious subject of experience. The assumption was unconscious in Ferrier but involved in the principle that the subject-object relation is fundamental and ultimate in knowledge. The ultimate datum of knowledge in Shadworth Hodgson's view does not contain this distinction. The ultimate datum is consciousness as pure process-content, and the distinction of subject and object does not arise until a later stage in the analysis, when the simple direct consciousness has been reflected on. A conscious agent—mind, soul, self, or ego—may be a true object of belief, but it is not to be identified with a fact, in the sense that it is an immediate and ultimate perception which cannot be doubted because it is immediate and ultimate.

From his teachers Shadworth Hodgson imbibed a strong Kantian tendency from which it became his constant purpose to free himself. He returned to the method of the English philosophers, Locke, Berkeley and Hume, to the direct interrogation of experience as distinct from the attempt to transcend it by discovering the *a priori* conditions on which it is possible. Consciousness or experience, he never wearied of insisting, is the sole evidence we have for anything whatever of nature or of existence. Although he succeeded on the theoretical side in completely emancipating himself from Kant, the influence of that philosopher in his practical doctrine remained a prepossession to the end. To some extent it introduced, at least to many it seemed to introduce, a contradiction in the very principle itself on which his method relied. This was pointed out by the present writer in an article in this journal on *The Metaphysic of Experience* shortly after its appearance (No. 31, July 1899, p. 395). To Shadworth Hodgson however the importance of the practical judgment was the experience on which it rested and to which it directly appealed, and not the intellectual construction it invited us to build on it. "Scholastics say *first*, There is an all-perfect Being, and *then*, We can love him with all the heart and mind. I reverse this order. I say *first*, We can love with all our whole heart and mind, and

then, the object of this love is God" (*Phil. of Reflection*, vol. ii., 292).

The first thing that calls for remark in an attempt to give the general features of Shadworth Hodgson's philosophy is the way in which he approached his subject. No spectre in the form of "the unknowable" stood to block the way or discourage the study of metaphysics. No preliminary inquiry such as "Is metaphysic possible?" which seemed to Kant and his followers a necessary prelude or prolegomena to the study of philosophy, challenged him and threatened to make the whole enterprise vain. If we begin by analysing consciousness, he said, we shall see very early in our progress how these false problems arise and take shape, but their power to paralyse will then be gone. Metaphysics is the quite natural inquiry of the human mind to which it is led in its endeavour, which is part of its nature, to obtain a rational conception of the universe in which it finds itself, and of its relation to that universe. It comes last in the order of knowledge though it deals with that which is first in the order of existence. It comes after physics in the Aristotelian order, but its object is the real universe, the Being which is absolutely fundamental. "The knowledge of Being has, ever since the days of Aristotle, been called *Metaphysic*. The name, it is well known, was due to the merest accident, but the accident was a singularly happy one; in fact, the only Beyond—*Μετά*—to physical being is consciousness, and whatever else (if anything) may be known by inference from interrogating it." Ordinary common sense experience is the *analysandum* of Metaphysics, and its method is direct interrogation of experience in order to know first, what it is in its ultimate nature, and secondly, how it comes to take its place in what we afterwards recognise as an order of real conditions.

Here then is our simple introduction to metaphysics. We begin with a vast mass of acquired experience which includes both fact and fancy. It is expressed in language which has grown up *pari passu* with it. Two questions naturally arise in regard to it, *What is it?* and *How comes it?* One is the question of its nature, the other of its genesis, and both are ultimate questions addressed to reality. Now the cardinal point in Shadworth Hodgson's view was this, that in philosophy the question *What is?* is always prior to the question *How comes?* He founded the principle on this fact, plain and self-evident, that consciousness is the sole evidence we have of or for anything whatever, itself included. Philosophy must analyse that evidence, for it has no other, and it must

avoid all assumptions, whether they be conscious in the form of hypotheses, or unconscious in the acceptance of apparently self-evident or necessary ideas, such as that of a conscious being or agent—soul, mind or ego—who *has* the experience. It must avoid these assumptions because the object of the analysis is to discover what *is* the experience, what are the ultimate, immediate and unavoidable *data*, the *given facts* of experience. It is this method of analysing experience without assumptions that distinguishes philosophy from the subject sciences, including that science which like philosophy has the whole of conscious experience for its subject matter, namely, psychology. The sciences necessarily assume their subject matter, they advance by the progressive verification of hypotheses. In science, as in the ordinary conduct of life, we seek the explanation of facts in other facts, and there is in experience something which compels us to look for this explanation, but of experiencing itself no explanation can be given which does not itself contain another instance of the fact to be explained. And this it is that condemns the only other method possible in philosophy, the method of explaining experience by the *a priori* conditions which make it possible.

Before we try to follow the application of the method let us take note of the problem it has to solve. Consciousness reveals existence—existence that is not commensurate with the consciousness that reveals it. How can it do this? How can the analysis of consciousness give us anything, or enable us to infer anything, that is not consciousness? Either it would seem we are condemned from the first to the barren assertion that what we perceive is perception, that the only *esse* is *percipi*, that there is no being or existence independently of, or not included in, our own existent consciousness; or else, we must be able to transcend experience, the possibility of doing which is just that which our method denies. Shadworth Hodgson rejected both the alternatives. By direct interrogation of experience, by analysis of consciousness without assumptions, he insisted it is possible to, and we in fact do, gain the knowledge of a universe of independent reality.

The first important fact that the analysis of consciousness reveals is that the elements that we distinguish in experience are inseparable. There are no such things as atoms in consciousness. The *distinction* of *inseparables* in all experience he declared to be the most important and fundamental fact in philosophy. The simplest and lowest moment of consciousness we can imagine or think of, is not perfectly simple, it has for instance some duration and some specific

quality, but these elements, though distinguishable, are non-separable. The first and least thing in consciousness is both process and content, neither is the process the content nor the content the process, nor does either exist *per se*. It is the essential characteristic of the metaphysical method that it distinguishes inseparables.

The importance of this is at once evident in the actual analysis of the moment of consciousness, in the light that it throws on the essential nature of consciousness itself. Consciousness is a reflection, it is a looking back on a receding stream. That receding stream is moving from the present vivid actuality into the past and is yet retained in the present as it moves away, and it is also at the same time an existence which is moving from past to present. There are two opposite time directions of one and the same time duration distinguishable and inseparable in all perception, perception being the ultimate empirical datum in consciousness. This enables us to understand how one and the same consciousness can have two aspects, the subjective aspect of *knowing*, and the objective aspect of *existence*. And we see also how in the process of consciousness the object of consciousness is formed. In any simple moment of consciousness, what we may call the presentation (by which is not meant the presentation of an object but the simple content itself of present awareness, which may be a sensation, a feeling of pleasure or pain, an image or thought or idea) arises, passes from the vividness of the actual present into the dimness of the past, but as it recedes and becomes wholly past it is retained, and so long as it is retained the perception of it is present though it is past, and so the distinction arises between the past presentation now an object, and the perception of it now a representation. When we think of the present moment as a member of the stream moving from past to present we are thinking of it as *existent*, when we think of it as moving from present to past we are thinking of it as a *knowing*. Thus out of the analysis of one and the same consciousness there arise two orders, an order of knowing and an order of existence, the one receding from the present into memory, the other forward moving from past to present. Of these two orders the receding order is prior to the existence order in knowledge, for consciousness as knowing is the sole evidence for consciousness as existing. But as existence, consciousness is the objectification of its own content as a knowing. The content of each actually present member becomes as it recedes into memory the object of the next actually present member as it moves forward.

In this analysis there has been no question of genesis, but so soon as the existent character of consciousness is recognised, the question, *How comes?* is forced upon us. It is a question our nature compels us to ask with the same necessity that it makes us ask, *What is?* All that the method of subjective analysis has required is its postponement. What brings consciousness as a knowing into existence? What accounts for the occurrence, the arising of consciousness? It might still be possible to postpone this question until the analysis of consciousness, which alone can supply the answer, is complete, were every moment of consciousness equally simple, a perception in which the process content is retained throughout. We watch a simple presentation *a* arise and recede as *b*, *c*, *d* succeed it, *a* being continuously present by its retention in memory. But a new and peculiar difficulty arises when the consciousness to be analysed contains a pure memory, a recognition of a past experience cut off from the present by an interval of unconsciousness. This experience it is that compels us to infer some agency. But it is consciousness as an existence, not its nature as a knowing, that compels us to raise the question of genesis. There can be no genesis of the nature of consciousness, for that is ultimate, but as an existent it is a more or less permanent object among other objects. As a knowing it is a stream every portion of which is transitory, arising once and passing away never to return. What guarantees the permanence of the existence of the stream? What is the real condition, or what are the conditions of consciousness? For the answer we must interrogate experience, for no answer is possible except in terms of perceptual experience, whether we derive it by direct insight or by inference. Two answers are possible. Either the agency or efficiency is in the conscious process of knowing itself, or it is in the existence objectified in that knowing. Which it is, an appeal to experience can alone decide, and the issue of the appeal is in Shadworth Hodgson's view doubly decisive. Every attempt to discover agency in the process content of consciousness itself fails, and, on the contrary, analysis of that process content leads us necessarily to infer as the real condition of consciousness something that we must think of as not consciousness. The most searching analysis of consciousness as a knowing fails to distinguish anything which as Mind, Soul, Self or Ego, we can identify as the pure Subject of perception, the real condition of knowing. And not only can we not perceive a pure Subject, that is to say a perceiver apart from his perceiving process with its content (for the very idea of doing so involves a contra-

diction, the pure subject would be made an object in the very act of perceiving it), but also analysis does not justify us even in inferring it, for what we objectify when we speak of the pure subject is our own thought of consciousness in the abstract, that is distinguished from objects and objectivity. Now reality in the full sense means perceivability, that is, objectivity to consciousness, combined with efficiency or agency, that is, the power of being a real condition of the genesis of something, or of a change in something—of an event. As simple matter of fact this full meaning of the term Reality is originally given to us in the experience of matter and of an external material world. How then do we acquire this knowledge of matter and of independent reality?

The answer to this question will make clear the distinctive feature of Shadworth Hodgson's philosophy, its radical empiricism. Our idea of reality, our whole knowledge of reality, is given to us in sentient experience. His definition of reality—perceivability combined with efficiency—excluded the idea of an Absolute, or a Transcendent, or a Thing-in-itself, anything thought of as in its own nature non-perceivable. Neither could it admit the authority of any *a priori* criterion of reality, any idea of what anything must be if it is *truly* real. Actual sense data alone can reveal fact, as they alone can give it meaning. And the same reason that led him to adopt the usual scientific meaning of reality, namely, fact that is or may be experienced, against the idealist or absolutist doctrine that Reality is the Absolute as a perfect and complete individual whole, also led him to maintain the usually accepted definition of truth, namely, that it is a correct representation of fact, against the doctrine of Pragmatism that it is a practical postulate. To know reality is not to know the Totality or Completeness of the real. "When I perceive or cognise any object, the truth of that perception or cognition consists in its being a correct *knowing* of its object as a real being, or existent, or fact, or event." The fallacy of Pragmatism is the tacit substitution for the idea of reality as the object known by truth, of the idea of Totality. Totality belongs as an idea not to knowledge simply but to some department or system of knowledge. It is of particular interest in this connexion to notice his criticism of William James, who had so much in common with him, but who in a curious way managed to combine with or graft on to his radical empiricism the pragmatic theory of truth. The criticism occurs in Shadworth Hodgson's paper before the British Academy (*Proc. Brit. Acad.*, vol. v.), the last paper that he published. Prof. James,

he said, "sees no difference between defining truth as the agreement of certain of our ideas with reality and defining it as verification. As he sees no difference he finds no difficulty in substituting one definition for the other." The whole passage may be referred to as an illustration of Shadworth Hodgson's skilful dialectic combined with perfect courtesy.

The main task then that Shadworth Hodgson undertook and carried out as the essential work of philosophy was a thorough analysis of experience. By this he claimed that he could show how sense data directly or by their combination are evidence of a reality that is non-consciousness, which reality is the cause, or, as he called it, the condition, of the existence of that same consciousness which as a knowing is the only evidence of it. The accomplishment of this work he regarded as the triumphant vindication of the metaphysical method. But at the same time it exposed him to the severest criticism, and apart from its particular value it cannot be denied that it gave to his whole system an appearance of artificiality that was perhaps more than anything else the stumbling-block to its acceptance. It was a prodigious task. It was nothing less than to show how our knowledge of the external world, and of the nature of that world, of the formal and material elements that constitute it, and the knowledge of our own existence as conscious individuals in the world, arise out of simple elements or ultimate data of consciousness which as such do not contain the knowledge. The main difficulty of the task is that the knowledge of which the philosopher has to show the genesis is already fully formed and part and parcel of our common sense experience when the analysis is entered upon. If this possession of our common humanity has a history, it lies so far back in the life of the individual or of the race that it is irrecoverable. Analysis cannot therefore, if only on account of this practical difficulty, reconstitute the history of experience as a succession in time, but it can show the order of knowledge in which experience has grown into the consciousness of a world of independent reality of which we are part and in which we act. The ultimate elements of experience are sense data, and these differ fundamentally in their own nature and in the kind of knowledge they give us and in the extent of reality they reveal. It is not until experience is far advanced in the perceiving and combining of these sense data that the world is made known in the full sense of reality, that is, as perceivability combined with efficiency. It is curious to note that while time is revealed in every sensation, even in the simplest moment of consciousness,

space does not appear until much later and only in connexion with a special kind of sense data, that of vision. Organic sensations, emotional feelings, the senses of taste, smell and sound, all with their specific pleasures and pains, do not any of them, singly or combined, by themselves alone, give us knowledge of our own organic body or of the spatial world. Visual sensations give us the perception of space-extension, but in two dimensions only, length and breadth. It is tactual sensations alone which gives us the perception of space in three dimensions, and therefore the knowledge of solid bodies, one of which is our own bodily organism. But our knowledge of the reality of matter in the full sense of efficiency or agency is dependent on the combination of the two senses, sight and touch.

Shadworth Hodgson attached the greatest importance to this discovery of the part played by sensations of touch in introducing us into the world of real conditions. Every other constituent of experience could do no more than enable us to infer a world of existence independent of the world of knowing. In touch we actually enter that world. He was at great pains in all his writings and at every opportunity that debate offered him, to explain this point. It was in fact the pivot on which his whole system revolved. In tactual sensations, intensified, he thought, by muscular sensations, we have not merely evidence, but positive knowledge of a reality which is not-consciousness and which possesses an efficiency of its own independent of that consciousness which is a knowledge of it, and of whose existence it is a real condition. The favourite way in which he illustrated this doctrine was by instancing the grasping and feeling one hand with the other, or the grasping and feeling any small solid object such as a billiard ball. We find, he said, that the sensations occupy the same portion of space, at and for the same portion of time duration, as the solid object, which is a *replica* of the sensations, occupies; and we also find that this same object, the *replica*, is known as different from and independent of the sensations of which it is the *replica*. It is known to be different by two facts—first, it is capable of an entirely different analysis from the sensations, an analysis into physical parts and forces, or modes of motion, this shows that it is non-consciousness; and secondly, it produces the occurrence in consciousness of the sensations of which it is the *replica*, this shows that it possesses agency, which consciousness does not. And at the same time that it is different it is also identical with the sensations which are the immediate perception of it, for sensations and their *replica* both occupy one and the

same portion of three-dimensional space for one and the same portion of time, namely, the time of their actual presentation in experience. The reality of sensed matter thus gives to science a real subject-matter, a solid physical object which it can submit to an analysis altogether different from the analysis of the sensations which are the knowledge of it. But nevertheless it is from these sensations that all the ideas, terms and hypotheses of physical science derive their meaning. Whatever the ultimate elements into which physical science resolves matter—atoms, molecules, electrons, forces—they can only be imagined, they can only be denoted and described in terms not merely of sensitivity in general but of tactual and muscular sensitivity in particular.

By this method of analysis systematically applied throughout the whole of conscious experience Shadworth Hodgson arrived at those conclusions on the main problems of philosophy which, because his confidence in the method never wavered, he held with such tenacity throughout his life. On the question of Idealism, he rejected utterly every form of it that endowed consciousness, either as feeling, thought, or desire, with agency or efficiency, but on the other hand he held that one sense of reality is perceivability. He accepted therefore the Berkeleyan *esse* is *percipi* as universally true for the subjective aspect of reality. In its objective aspect reality means belonging to an order of real conditioning. The term real condition was chosen by him to take the place of the older conceptions of substance and cause, for which, as Berkeley and Hume had shown, experience held no warrant. Nothing in experience explains the fact itself of experience. Experience shows us in matter and material processes the only positively known real conditions of the existence of consciousness in individual subjects. He was not a materialist. He did not conceive matter to be a cause, that is, ultimate and explanatory of its effect and of itself. Matter is itself conditioned, a combination of elements that apart would not be matter, though its conditions are unknown to us. They lie in the Unseen Universe.

On the question of the relation of Body and Mind he held that consciousness is, what it is now usual to call, an epiphenomenon, which he expressed by saying that it is always the conditionate, never the condition, of organic and inorganic interaction. The proximate real conditions of consciousness lie in the neuro-cerebral system. He did not deny the possibility of immaterial agency, and the idea of some

> Animula vagula, blandula,
> Hospes comesque corporis,

as the true proximate real condition of consciousness as an existent, had for him personally an overpowering attraction, but he did not allow the desire to blind him to the fact that he could find no warrant for the fact in experience.

I do not propose to give a detailed account of the ethical and religious portion of his philosophy. It was founded on the same empirical principle as the theoretic part, namely, the analysis of experience without assumptions and the postponement of questions of genesis to questions of nature. The data of this analysis are the emotions, as in the theoretical part they are the sensations. But as the former do not, as the latter do, reveal their proximate real conditions, we have to supply these by practical postulates. In so doing we gain no insight into the nature of these objects, which are objects not of positive knowledge but of faith. It is impossible to read this portion of Shadworth Hodgson's work without seeing that it expresses the intense personal longing of a deeply sympathetic mind.

On the question of free will, notwithstanding that he so resolutely opposed the hypothesis of an immaterial agency as being entirely unwarranted by the facts of experience, yet he held that in all volition we are free agents. The proof rested on scientific, that is to say, psychological, and not on metaphysical arguments. He adopted the definition of Hobbes: "Liberty is the absence of all the impediments to action that are not contained in the nature and intrinsical quality of the agent". Freedom therefore is self determination. The subject of this self determination, however, is not an entity intermediated between the conditions and the action, the common mistake of determinists and indeterminists alike, but the neuro-cerebral conditions themselves with their accompanying consciousness. Volition as a whole is characterised by deliberation and choice, modes of consciousness. The awareness or sense of freedom, is the perception of the feature universally present in volitions, namely, the uncertainty of their issue. This argument, which occupies a long section in the *Metaphysic of Experience* (vol. iv., pp. 118-180) and formed the substance of two important articles in MIND (Oct., 1885, and April, 1891), was one that he himself highly valued. It failed however to satisfy the upholder of the doctrine of free will as it did not establish that freedom of the person from the mechanism of nature which is for the champion of free will the main interest in the contention; it also failed as against determinism, except perhaps in the narrow sense that few determinists would accept, the kind of fatalism that he named "compul-

sory determinism". It is however an entirely admirable analysis of conscious volition from the standpoint of experience.

It is curious to notice how some of the most striking of the doctrines that have formed the basis of the bold speculations of M. Bergson are clearly set forth in Shadworth Hodgson's analysis. I have already called attention to the priority of time over space, to the psychological character of duration and its fundamental position as one of the inseparable elements of the simplest conscious process, but perhaps more remarkable is the clear way in which he has drawn attention to the spatialising of time. "Whenever we picture time-sequences by the aid of imagery drawn from space, as the language we use to describe them shows to be the universal habit, we tend to imagine the phenomena, with which time past or future is peopled by memory or by anticipation, as having a present existence in time which is not present, owing to the circumstance that we imagine them to exist in those directions of simultaneously existing space, which we use to represent the directions of time" (*Metaphysic of Experience*, i., 67). His doctrine of the reflective character of consciousness with its double aspect also seems to come very near to the distinction of experiencing from within in living and viewing from without in knowing, which is the fundamental distinction in M. Bergson's philosophy. Shadworth Hodgson, however, was never tempted to the speculative flights and brilliant syntheses that have awakened in our time a new interest in philosophy. For him the business of philosophy was patient, plodding, laborious analysis.

For this reason to many readers Shadworth Hodgson's philosophy seemed dull, but it may on that very account prove the more enduring. He had a faith in his principle which led him to bring to philosophy the training and skill and diligence that would have ensured his success in any department of science, and he devoted himself to the application of that principle in building up a substantial body of doctrine. His ideal was not to point a new direction, nor to construct a perfect and harmonious system, still less was it to satisfy the craving of the human mind for a *Weltanschauung*. His ideal was to gain for philosophy the full recognition of its high rank in the hierarchy of human knowledge, to remove from Metaphysics the reproach that it was a vain pursuit of the unknowable, to point out the definite task and exhibit the special method of philosophical study. To his devotion to this ideal we can all do homage.

II.—THE REIGN OF SCIENCE IN THE HISTORY OF A RACE.

By Alfred H. Lloyd.

Introductory Note.—The following article is what eventually should constitute one chapter in a history, let me now call it *The History of the Humani*, that I have been working upon for some time. This chapter is published at this time as a sort of preliminary report after the manner of many workers in the field of science. In my history, in some sense necessarily a work of fiction, I would show: (1) the peculiar values and the natural temporal sequence, the "line of succession" of the following five attitudes or disciplines, namely, law, art, science, philosophy, and religion, in the course, that is in the rise and fall, of a civilisation; (2) the part taken by the life, particularly by the conflicts, of the social classes; and (3) the possibilities and the achievements of personal character which must certainly belong to civilisation and which must enlarge and deepen as a civilisation runs its course. Thus, as now planned, my history is to be a study of civilisation and personality, and, if it have any success, it should be a contribution in the field of the philosophy of history.

In general a civilisation must be said to proceed with the development of sophistication and finesse in the life and consciousness of the particular race concerned, and this development may certainly be spoken of as the people's progressive reaction upon the conflict of its life with the life which at least formally is foreign to it, that is, with the larger and fuller life of the natural environment, human and physical. Doubtless in such a standpoint there is much that is artificial, since any assumed point of view always makes for some artificiality. But it seems enough that the possible artificiality of this history is fully recognised and admitted. With special regard, however, to that sequence of attitudes or disciplines it should be recognised with particular candour that no sequence in time can ever tell the whole story of any history. Coexistence is an essential dimension of all whole history that *even* the professional historians often forget or shamefully neglect. Law, art, science, philosophy, and religion may indeed be found, as in this projected history, to be in temporal sequence, but they will be so only

relatively to the development of a particular situation or relationship. They should be observed also, all of them, as coexisting factors at any time in the people's life. Similarly, to use an old figure, those who occupy a particular place on the earth see the day and the night in sequence, but, if one regards the day and the night from the viewpoint of the sun, then are they significantly both coincident and in sequence.

The progressive story of the Humani's "line of succession," one reign of which is to be described here, I have tried to indicate very concisely as follows: Law—Simple Assertion of the Human against the Natural; Art—Consequent Intrigue of the Human with the Natural; Science—Eventual Candour towards Nature and the Alliance with Utility; Philosophy—Liberation of the Spirit with Gift of the Human to the Natural; and Religion—After the Giving Getting. In the process thus indicated through five of its stages two movements, among the many that analysis can discover, may be spoken of here as of greatest importance, namely, the rise of an ever-widening relationship and outlook, politically and socially shown in an ever freer cosmopolitanism, and at the same time the realisation of an ever deeper and richer inner human life, shown in the growth of a deeply reflective consciousness, in a widespread individualism among men, and in the appearance of great personalities, of moral and religious leaders.

In this introductory note, finally, it remains only to give very brief summaries of the accounts of the two reigns preceding that of science. Thus, in their first reign, representing their first act of sophistication, the people made laws, so many positive statements of their developed customs, of their existing practice. Such formal statements, beginning a process of the rationalisation of their customs, showed human self-assertion and self-consciousness and confidence and conceit of action and not only secured more consistency and system in life but also made possible greater diversity or differentiation—division of labour, more distinct classes, and so on. The law, in short, served as a sort of medium of distribution and exchange. In operation, however, because of the increasing extent and complexity of life, the law gradually lost its rigor and both the might sustaining the law lost its brutality and the instincts controlled by the law lost their blind passion. Instead of positive law, therefore, something more pliant, the spirit rather than the form, assumed authority; might gave way to physical restraint of a more sympathetic sort, æsthetic in its appeal rather than arbitrary; and life came to be lived, not in an atmosphere of conformity or non-conformity, but in the much freer atmosphere of analogy or metaphor. Art, in other words, succeeded law.

In the second reign, that of art, although less rigorously loyal to their law and institutions, showing more licence and wider sympathy, the people were condescending and sentimental rather than candid towards what did not literally conform to their own positive ways.

Their characteristic expression, offensive or defensive, was through objects and ways—such as fine buildings, statues, manners, dress, the nice art of diplomacy—that (1) exhibited a freedom of form at once gracefully conservative of their own traditions and yet also by analogy or metaphor intelligible to people of other traditions; (2) possessed sense-values effective with all men; and (3) stimulated by interpreting their own new, freer, inner life which the lessened rigor of the law had brought them. Thus their life was still conserved and conservative; it was locally, that is nationally or racially, sensitive; but it was also in reality freer and broader and through its art and licence it was intriguing with what, whether without or within, was foreign to its own visible forms and institutions. But the inevitable result of such intrigue was still greater breadth and depth. Life even lost, or nearly lost, its local sensitiveness; it became so free and broad as to be locally insensitive, as to be rationally open and candid. In respect to its visible form, its language and institutions, its dress and manner, to all the media of its expression, it turned prosaic, conventionalised, utilitarian. Its characteristic attitudes were rationalistic, not æsthetic; its characteristic affairs were industrial and commercial, not military and romantic. Whereupon art was gathered to its fathers and science came to reign in art's stead.

In the history of the Humani the third reign, the reign of science, has been by common consent the most perplexing in the whole line of succession, and I shall certainly have difficulty in making my conception of it altogether clear for no other reason than that I am myself in much doubt not merely as to what to say but also as to what to think. Still by describing at some length several phases of the life of the time and by pointing out a certain easy misapprehension in regard to it I must hope to show at least its most general characteristics and its significant part in the Humani's history.

To begin with, I know nothing better to say of the new reign, nothing more accurately descriptive, than that in its various interests and activities double living was the rule. The real life was no longer on the surface. There was too much reserve and too much finesse for such simplicity. By suggesting that there was an alliance, however unconscious at first, of candour, that is, impersonal open-mindedness, with utility I have tried to indicate the nature of the duplicity. Thus not only does each of these allies imply indirection or mediation on its own account, but also the two seem incongruous with each other. The naturally or objectively true, demanded by candour, and the humanly useful, very much like theory and practice, have commonly been thought to be in serious if not hopeless conflict. Their alliance, then, seems

even unholy, and yet at this time on every side these extremes and others like them or incident to them were met together, being openly if not deliberately united and also, if I may put it so, living together almost if not quite without shame or any apparent unrest. It has been said here that sophistication with its finesse, its reserve and mediation, makes civilisation. Also plainly sophistication brings double living, and in those days of the reign of science, when the metaphors of life and their human sensitiveness were dead, sophistication stood up very straight, walking the streets with manifest ease and assurance, assuming an open mind towards all things and quietly and impersonally using what only recently had been so warmly cherished.

Men had come to know themselves and their world. Art was dead, having followed law to the grave ; and after living under the law and then for so many years in art's freer and peculiarly invigorating atmosphere of analogy or metaphor and reaching finally an insight beyond the humanly centred art into the deeper harmonies of nature, the Humani had quite lost that last check on the freedom of the sophisticated life, sensitiveness about themselves, about their own ways and traditions. Latterly they had been very much like so many youths in their first evening clothes, but now they were become men of the world, well-dressed and unconscious ; in an excellent manner, too, that to all appearances seemed correct or loyal, being socially and morally, politically and religiously, in proper form, but helped, not hindered by their fine manners in doing very much as they personally and naturally pleased. Moreover, in the whole gamut of human possibilities there was very little that they did not please. Surely such sophistication does bring extremes together: mere form and free life ; the local established law and order as only a lifeless medium and world-wide and man-wide interest and action ; correct dress and nature ; in short, utility, meaning in general the acquired value of the medium [1] of all life's activities, and candour, meaning the openness of mind and will that characterised those activities.

The Humani seem to have " arrived "—with apologies for such a colloquialism. No longer sensitive or conscious, they displayed a bewildering versatility, being as fluent in action at large as in their now prosaic speech. In all their affairs they developed an agility and skill that suggests more than anything else the acrobat or gymnast who performs his intricate turnings and twistings at dizzy heights, seems at every

[1] The medium was become an instrument or utility.

moment to be certain to fall to fearful injury, and yet, except for the rare accident, at last lands on his feet, bowing and smiling complacently. Their skill or genius, which had been artistic and æsthetic, was become, in one word, maturely mechanical. At least that is what I think it should be called. I think that mature mechanical genius means just such things, the personal or human unconsciousness, the quick adaptability, the freedom from set or rigid law, from mere habit or tradition, and at the same time the ready compliance with the spirit or form of law and order. Mechanical genius belongs to action that proceeds from a free centre, that is facile as well as lawful, being able to use freely any manifested system, being lawful but not law-bound. To such freedom and the genius of it, to the subtle sophistication of it, had the process by which their original customs were being rationalised, and which had found its first expression in positive law and its second expression in art, now brought the people of this history.

And, although unconscious in the sense of being insensitive, the life of the Humani was very far from lacking interest. Indeed it had a zest, a new enthusiasm of pursuit, which I know not how to describe: strong without any evidence of impulse or passion, real and deep without any manifest assertion or expression. The zest of life that calmly and quietly understands, that is versatile and mechanically skilful, that is humanly at ease, is so different from that of a life that, however demonstrative and aggressive, is still conscious of itself, of its feelings and its manner. Perhaps with the Humani the new zest that came with their life of understanding, of humanly free insight into the harmonies of nature, showed itself best in the change in their dramatic sense, whether this appeared in literature or in the every-day life of the street. They still laughed and wept, but, so sophisticated were they, comedy lay now in the strange pleasantries of blind accident, tragedy in impersonal, wholly irrevocable destiny. Being unconscious themselves they were bound to regard nature, that is, the whole, with which their own special and partial life was ever coming in comic or tragic contrast, as no less so. Moreover a zest such as theirs, involving relations to a world of unfeeling accident or destiny, showed the spirit of adventure still alive but very different in quality. The increased sophistication of the people—and sophistication, as was said, must always imply adventure—had changed the sphere of human activity and of the uncertainties of human activity from one of all sorts of direct sensuous encounters, the contestants using sheer might at first and then art and art's

sensible graces, and of course being in either case often but not always successful, to one of encounters which should rather be called intellectual or rationalistic. The calm rational calculation of the latter, possible only when men had lost their earlier self-consciousness and also requiring no direct physical or sensuous contact, necessarily made life's adventures very different indeed from those of sense. The world had in fact changed from one of spirits, powers, conscious wills, to one of blind accident and unfeeling destiny, but think what the change implied as men went out in thought or act to meet that new world—the conviction of natural law that was implied and the explorations, always adventurous and never lacking in either humour or tragedy, in the realm of reason and law.

I cannot yet leave this subject of the zest and adventure of the time. To some people the association of adventure with reason and natural law will still seem strange. A highly intellectual creature, they will admit, might pretend to understand it, but many if not most men would be disposed to laugh at such seething ice. Can true adventure be anything but an affair of unexplored seas, magic forests, giants, dragons and like marvels? Adventure, I reply, is far more than any or all of those things and emphatically the new life of the Humani was proving it more. Of course, if one sees nothing more in it, then the Humani certainly had passed into a life of mere routine, insensitive, purposeless, unproductive. To its mere mechanical skill, its agility and fluency and versatility, reference has been made already. It had also a certain brilliancy; it was bewildering and kaleidoscopic; it showed great wisdom of method. Yet these things do not seem to save it. Moreover many who had part in it found fault with it, as if something from the past had been lost; and others since have lamented the seeming decline, asking the very questions, so it happens, that we often hear put to our own rationalistic times. Thus: Is life, then, to be henceforth humanly unproductive? Has it reached a point where it needs only to cultivate itself, where its mere activity is quite self-sufficient, its round of routine intrinsically rich? And, if so, why must this present life be in such sharp contrast with the past? In the glorious past human laws were made and positive institutions established in face of all sorts of hostile powers; territory was acquired and settled, the achievement leaving the people many a story of heroic encounter; handsome buildings, noble statues and beautiful pictures were produced, and fine dress and manners developed and assumed; but now there certainly are no such

aims and results, no things so humanly alive, as those. Men are travelling, it is true, and more widely than ever before, but even here life seems deadened, for it has a peculiar commonplaceness and no matter where men go they show themselves very much at home. Instead of seeking mysterious places and objects, rumoured treasures or dangerous foes among men or powers of nature, they are taking safe journeys to well-known places on errands wholly lacking in the old-time human interest or romance. Hear what an unknown modern rhymster says of it all, speaking of course for his own time and people :—

> "They roam the woods, they climb the hills;
> They seek strange towns and streets:
> The towns reveal old friends; the woods,
> Imported houses—canned meats."

Is this new life, then, only routine? Is there no chance for real adventure? The answer is very easy. Under the old tests, no chance at all. Accordingly under the old tests those among the Humani who questioned and complained were quite right. It was and is, however, such a serious mistake to judge the life of humanly insensitive reason by the tests of sense. Why expect the aims and products of a rational life to be such directly and immediately human things as living institutions, beautiful buildings, graceful manners? Look rather for such things as will accord with reason's reserve and indirection, things that are not human or are only mechanically mediate to human life, such as prosaic, even deadly prosaic literature, formal plans and abstract theories wholly devoid of human feeling, methods that are strict and business-like, accurately measurable pecuniary wealth, and machinery—nowadays referred to as "our modern machinery". In the production and use of these things the Humani had no lack of interest and adventure. If, as I suspect, their heart-beats were become more regular or uniform, it was not from any lack of excitement but from the strain and the deliberation of the orderly self-control which their mechanical genius and its deeply adventurous routine required. When animals become domesticated and turn free and playful in their ways, chasing their own tails perhaps, there may be little if any adventure in it all, but when men, becoming sophisticated, do so, the adventure of their free routine is tremendous. It is as different from that of the olden times as the dashing brook on a mountain side from the slow, steady, powerful river in the plains.

Wholly natural was it that with the changes in their interest and adventure the people became, not sentimentally,

but quite openly and practically cosmopolitan. This means not merely that they developed positive interests of all sorts with all peoples in their known world and that foreign merchants and promoters, labourers and artisans, teachers and thinkers, frequented their cities, but also their own inner life openly related itself to all sides of human nature. There was, in other words, an inner or intensive as well as an outer cosmopolitanism. All men and the whole man were contemporary concerns of life. Conventionally, it is true and is also very important to remember, the people still held to their traditional law and order, so that the old distinction of civilised Humani and uncivilised foreigner or of human and natural still had vogue, but without the old time prejudice. Simply the people still held to their old ways, not with any special feeling for them, but to recall a phrase already used, because these provided a working standpoint, a practical basis, for exploitation of their cosmopolitan life. At the same time conventional distinctions are not by any means empty distinctions, for although showing the passing of differences of one kind, they only induce differences of another, making the conflicts among peoples or communities, like the adventures of life in general, affairs of reason, no longer affairs of sense and might; in other words, making the conflicts industrial, not military; mediated, not open and direct.

Besides such practical cosmopolitanism there was, as but one more evidence of the double living, of the paradoxical character, of the life of the time, the persisting tendency, shown as early as the great wars, to develop a racial superiority and leadership in a single city. To say nothing of the successes in the wars, the greatest achievements in art had been so centred, being the work mainly of one community or at least of individuals who, when not native, had come to, or at least looked to the centre, where the atmosphere was most favourable. Art had demanded this centralisation, and now with the new reign the need, if fact ever be an indication of need, was still greater. So with the growing and freer cosmopolitanism there was a more pronounced centralisation; in history, as elsewhere, centripetal and centrifugal forces were working together; and this was the more remarkable in view of the circumstance already dwelt upon, that, at least so far as sense-values, I mean the values of mere local sensitiveness, were involved, old distinctions were become only formal or conventional. However dressed, under whatever government born, men were all men. But although local sensitiveness no longer separated them, never-

theless the Humani, widely cosmopolitan, were identified in their own minds, if not in the minds of others, with the most civilised and in so far the most exclusive city in the world. The life of an insensitive reason seems to have replaced the old distinctions, which had become formal and superficial, with the new.

But I can say no more here in general characterisation of the reign of science. The life, we have seen, had acquired mechanical genius. Then, at least outwardly, with all its agility and fluency, it was prosy, insensitive, purposeless. Yet those who see in it only aimless routine are blind to the real life. The real life had, and for those who look through the right glasses, under the right tests, it shows great zest. It was richly productive, too, as well as purposive, but with the natural products of a rational life, a life of reserve and mediation, a life mechanically skilful. And to all else it added a wholly practical although very centrally localised cosmopolitanism. But now, such being the general life of the time, we have to observe two things of very special importance. In the mental life the peculiar genius of the Humani found expression through the rise of natural science; in the life of affairs, through commerce and industry. From having been artistic and æsthetic the people became scientific. From having been zealously and sensitively civic and political they became individualistic and commercial. Both of these changes must now be explained carefully.

When I say that the people became scientific I refer primarily to the interest and attitude of science, secondarily to the technique, although the technique was quick to develop with the assertion of interest. Simply, as an intimate part of all that we have seen of the life, the Humani were become mentally free, candid and actively curious. In the first place, their literary language was now prose, and more than this, as was shown, their institutional life as a whole was turned prosaic, being valued no longer immediately, but mediately. And then, as of greatest importance here and as calling for most careful reflection, whether expressed in language or in the institutions, the prosaic medium of life, although representing and preserving as it did a highly organised experience from the past, was evidence that the real interest of the time was not in the medium itself but in what lay beyond it. With that prosaic medium, in other words, man's regard was outward. It was also upon a world that was external or objective, and in its observations and reasoning it was held to just such rigid and formal methods as the prosaic medium, still preserving however insensitively the old law

and order and so at least formally conservative as well as prosaic, necessarily imposed. Reason, however, so constrained, that is, candidly observing and describing an external world and held to methods that were but the dried and conventionalised customs and laws of the past, was science—as it happens, a paradox also of our own time—the formally conservative interest in an external world with prosaic report of what is found there.

But the two words, prosaic and conservative, are easily misunderstood here. Prosaic as that organised life had become, there was preparing, if not already present, a vision with which the poetry and metaphor of former days could not be compared, which only the prosaic manner of the time could have made possible and which must have contributed largely to life's interest and effort. Let me put a simple question: Which shows the farther or deeper vision, the humanly sensitive metaphor of poetry or the dead medium of prose? The former may vaguely feel something beyond its view, but its view, outward and inward, is obscured and confined by all the colours of its metaphor. The latter shows the veil or the chromatic mists of metaphor removed and consciously and openly regards a world that is not humanly illuminated or fashioned and that is superior to and beyond or beneath any human form or law. Again, prose, which embodies the law and order of life and shows this no longer a thesis to be maintained but only a working standpoint or instrument from which or by which men may look wholly out—or wholly in—upon things as they naturally are, opens to view the visions of the mind's eye, serving the thinker's in distinction from the sensitive poet's imagination. Prose, then, truly is the farther and deeper vision. Indeed with its rise in their life men are as if forced to say in so many words: "Now must we see beyond the vision of our eyes".

Vision of the invisible indeed! Do science and its prosaic medium mean that? The formally conservative view of what is outside and so certainly cannot conform! Can poetry ever equal that? How even prose must labour! How certainly the mind so strained must actually consent to inconsistency and what freedom and interest it must feel with inconsistency sanctioned in such a cause! Tip-toeing, when all the measurements are against you, to look over the fence and to see clearly what lies there, or using the senses to see a world of reason, this is science and prose, and it reveals to us once more that among the Humani at least in

their mental life adventure certainly was not dead. Nor was humour. Said one of their contemporary writers:[1]

> "Queer creatures men who strive and strain
> For sight of what not one may view:
> They say they know they strive in vain;
> Yet, 'though they die, they strain anew.
> I wonder if it can be true
> That, blinded, they'd improve their sight;
> I wonder—would I really knew—
> If darkness be the brighter light."

Strange to say the time when those lines were written came to be known as "The Age of the Illumination". All the lights, however, were artificial. In their candour, their impersonal open-mindedness, and their sophistication men no longer trusted their vision or their own biased senses generally. Mechanically skilful as they were, they devised instruments of all sorts, and by use of these made nature, as it were, do their perceiving and valuing for them. They insisted on accurate, objective standards and measurements, popularly and professionally resorting thus to mathematics as the sovereign over all their judgments or as a sort of conventionalised, purified and de-humanised legal order. In short, in all the matters of human perception a most subtle indirection, making for objectivity and exactness, was the rule. Men did not themselves see, yet saw as never before—in artificial ways, under an artificial light. They looked closely, but not at what they themselves had ever seen. So was their prosaic life not poetic, but superpoetic. In prose the thought or vision always transcends the medium.

As for the conservatism of the time, the only formal conservatism, this also calls for some explanation. It was so formal, or conventional, that the inevitably negative results of the outward regard of the scientific candour of the day lost much if not all of their sting. These results could not but be negative, because the life and nature that lay outside simply could not conform. The Humani's prosaic life and its candour led them to inquire if this or that thing really were or were not true, if the Gods of their fathers did or did not exist, if the laws and institutions of their race did or did not have real warrant, and also bade them, so inquiring, to look without bias at all things as they naturally were, and in every instance the finding was and had to be negative. Nature refused to reveal what men seemed to be asking of her. The case was like that of the man, so often

[1] The translation is from the Humanish.

referred to, who swept both the mountain tops and the higher heavens with his telescope looking for the God of his ancestors and reported no God there. When conservatism is formal, however, when traditions have become mere conventions or mere standpoints or instruments, nicely developed and refined, of investigation, and above all when values have changed—from the immediate values of sense, for example, to the mediate values of reason, those negative results both are foregone conclusions, being in fact quite true to the real if not to the apparent life of the observers, and cannot have much sting.

Of course conservatism, however formal and prosaic, was a necessary condition of the scientific attitude. Stability of conditions was necessary for the objectivity and for the measurements, the accuracy and precision, required. The scientific mind, whether we think of it as belonging to the general consciousness of the people or as belonging to some highly trained expert, was in one respect like the mind of business, even of common commercial enterprise; it required that the established order remain, insensitive perhaps, but in any event intact; it was not and could not be patient with anything that disturbed the integrity or stability, sometimes known as the credit, of the country. Lumber-wagons or war-chariots must not pass too near the scientist's workroom. He himself must be free from military service. Revolution and all like incommodities may or may not go well with philosophy, but science must have quiet. Radical in its results as well as in its asserted objective interest and in the real life that lay beneath its prose and its candour and its yes-or-no questions of mere fact, it still could not break with the past. Materially radical, formally it was still loyal. Somebody has said that the past is a club with which the future—sometimes called Hercules?—knocks over the present. The saying is a good one, although a bit mysterious and fantastic, and in the days of their only formally conservative science the Humani had that club well in hand but could not or at least did not swing it.

With their science, which was, as just said, formally conservative but materially radical or negative, the Humani acquired an external world which was for them mechanical or—in a special but familiar sense—physical,[1] and at risk of seeming to digress I would speak briefly of this. Of course the idea of unfeeling accident and destiny has already sug-

[1] The special sense is of course indicated in the phrase "physical sciences" applied to chemistry and physics and calling for quantitative differences and relations, for mathematical explanations.

gested to us a purely physical character for the external world, but I must call attention now to the special matter of acquisition. Most people think of the outer world as having always been what it is for them. Others who have gone before are supposed to have had false ideas of it, to have been abnormal in their judgments, to have needed "modern" enlightenment. In such a view, however, there is a serious fallacy, for the so-called external world is neither fixed in character nor external in the way supposed. Men grow and their world grows with them. Possessed with spirits and magic at one time it may be physical at another, and whatever it is at any time it is by their acquisition. There is always, in other words, a noble companionship of men with the external world. It is, for example, physical or mechanical, a world of unfeeling accident or destiny, only when men have become freely rational and, in general, through what must seem essentially moral, and just they and their world are always meeting on equal terms, the world being a good sportsman in that it refuses to take any one not of its own size. No child has a physical world and no savage has or ever had one. So, as to the Humani, they had grown to a certain estate and their world was become physical.

And I have mentioned the acquisition of a physical world for a very special reason. Such a world, I feel sure, supplied the ideal atmosphere, the perfect *milieu*, for the peculiar freedom and especially for the personal individualism to which the Humani had come and upon which both their practical affairs and their scientific interests certainly depended. It is quite true that a physical world means law, natural law, and that natural law very commonly has been thought opposed to human freedom, but this common notion must be wrong. The facts wholly belie it. Among the Humani, rational beings as they were with a physical, mechanical world, individual initiative was general, conspicuously confident, and surprisingly various and diverse in its thoughts and acts; nor can I myself see anything at all to wonder at in this fact. If the people had not themselves grown to that world, if they had not acquired it, the case had certainly been very different, but they had acquired it and, among other things, in its acquisition they had gained, as we know, the skill of indirection, the power of distinguishing between means and end, which their sophistication had brought. So in relation to a mechanical world—and it was their world—they had such skill or power, implying, if I must repeat, mediation, reserve, calm finesse, and with this power, just because of it, not in spite of it, their world being physical,

the opportunity for the individual was unlimited. Was not the case like what we see in the use of language? The more prosaic a language is, the more it is merely a medium of expression, the more is it only at once a medium and a distributor of different opinions. Prosaic routine, whether that of language or that of a physical world, has always made individuals, assertive, confident, and surprisingly different individuals, and this fact, obviously making its own special contribution to the quality of life and especially, as I can only suggest, to the social consciousness, to the relations among individuals as they meet and act and react on each other, is by no means the least of many things which must be kept clearly in mind by those who would understand either the intellectual or the practical life of the Humani in their third reign. How skilful they were in all their encounters, intellectual, social or occupational! They seemed like mind-readers, in idle conversation or serious argument responding with marvellous acumen to the slightest hints of word or gesture. If they possessed great reserve, they were also for ever battling to uncover each other's defences and disguises, and this skill, besides aiding tremendously their study and understanding of a not less subtle nature, throws additional light on the great zest which their life had. Says one writer, discussing just this in their life: "With instruments of observation and exact measurement they studied nature coldly and objectively and, meeting personally, they showed the same reserve and calculation and the same insight, and although they have been called unfeeling, unsocial, lacking in personal devotions, rationalistic, there was truly a most absorbing interest in what they were doing, and with all their undemonstrativeness they really were not unsocial nor only selfishly social but were personally dependent on each other. Their rationalism changed their expression greatly; it gave rise to their so-called individualism; but it impaired neither their interest in life at large nor their interest in each other. In fact both of these interests were probably greatly enhanced. *The social attitudes and methods in a life of liberated reason may be* sui generis, *but they are genuine.*[1]"

Besides becoming scientific, the Humani became also commercial. To repeat from above: "From having been zealously and sensitively civic and political (in their life of affairs) they became individualistic and commercial". As was said also, although at the time quite incidentally, science and commerce have this in common, that both must always

[1] Italics mine.

be impatient with anything affecting the credit of the country. For both the established order of things must be insensitive but also remain intact. For both, once more, the established order was a means or instrument, not an end, and, using the means thus at hand, both exploited the natural world rationally or with accurate calculation, showing reason unhampered by sense. Commerce as well as science with the Humani, as with other peoples, was thus prosaically rationalistic and "objective," and its characteristic interest and activities were conducted with indirection and mediation.

The prosaic medium of the Humani's commerce took many forms. From the standpoint of labour there was a great saving of direct human activity by the invention of all sorts of machinery. Nature was thus made the agent of man's practical life, and, relieved in this way, man was able to turn his energies to the tasks of careful direction and management in place of those of immediate production. The result in efficiency it is not necessary for me to dwell upon. Then, as essential to the new tasks, there were business methods, accounts, cold calculation, absence of soul; all showing very plainly the rationalism of commerce. Nothing, however, appears to me to have been more significant than the change that came about in the notion of property and its valuation. Primarily all forms of property, besides being consciously and legally owned by individuals, came to be centred in one thing, this being, so far as possible, standardised and dehumanised, that is, rendered undesirable by men for its own sake, being, namely, only a medium of valuation and equitable exchange and being carefully defined as such a medium and, to comprehend everything by mentioning extremes, neither good as an article of food nor sacred among objects of religious interest. Such then was the change made in the form and valuation of property, and not the life of reason itself, now so open and free, nor the use of machinery, that has ever had its fascination for men, was more manifestly stimulating or had greater part in the zest or subtlety, the agile human interchange or the world-wide human interest and sympathy of the people than this prosaic medium of commerce, the monetary standard of the realm. In it as a common interest and a common measure, an object of reason, not of sense, all the manifold desires of men found a meeting-place and—for so it would have to be also—a distributing centre. Prosaic itself, humanly dead, it nevertheless, like the mechanical nature that so aided in its accumulation, was potential with every human passion, high or low, and became for every individual and for society as a

whole a focus of all the competing elements of human nature, and the almost universal pursuit of it or conscious dependence upon it affords only additional evidence of the finesse and sophistication to which men had attained. Wanting many things, but openly always seeking one; being, as one writer defined him, "a money-getting machine," although at the same time, however reservedly, his life was constantly and deeply stirred with hunger and love, political ambition and social longing, intellectual interest and religious fervour, man in his commercial and industrial life exhibited a capacity of rational intrigue and indirection, a condition of double living that was equalled by nothing in his career up to this time unless by the scientific ingenuity which was contemporary with it. He showed, too, a knowledge of himself and a consequent facility in meeting other men and competing with them that also can have had its equal only in the brilliant social and intellectual encounters to which reference has been made already.

And if commerce was thus like science and so was properly contemporary with science in being rationalistic and only formally and prosaically conservative and in being so skilfully indirect, it was like science and contemporary with it also in its calculating exploitation of everything human and natural, of everything near to human life and foreign. There was, I think, a very general situation exemplified in the notable fact that often following the armies which still went forth on one campaign and another there were both men of science or their representatives collecting material for scientific studies and men of commerce seeking in the various regions traversed, even in the land of the enemy, a market for their wares. Of course there were expeditions, scientific and commercial, in times of peace, but this insistence of both even during war was significant. Moreover the wars themselves were in most part for commercial and industrial rights, not for mere conquest, and their conduct was under restraints that sought to protect commercial interests as much as possible and that recognised also the exemption of science, or of intellectual life generally, from military entanglements. In its extreme form the restraint of open wars took the form of a demand for universal peace. Often the demand was only negative, being antimilitaristic and sentimentally humanitarian, but there is good evidence for believing that something more positive and substantial than this lay behind the polemics and the sentiment. By suppressing military contests, referred to above as contests of sense and sheer might, there would be

increased opportunity, not for the doubtful blessing of mere sentimental, heavenly peace, but for free industrial competition, for the contests of reason and mechanical skill. The latter may not go forth for carnage and destruction, but somehow peace does not seem to me to be an adequate description of them. But I was saying, in so many words, that commerce was as objective in its exploitations of the outer world as science. Like science commerce depended on the standing organisation of life and society, but used this organisation in activities that were world-wide. The mention of war and militarism was only incidental to the explanation of this fact.

To sum up very briefly at this point, in their third reign the Humani were openly and freely rationalistic. The scientific spirit controlled their intellectual; the commercial, their practical life. Thus candour and utility truly were allied, although undoubtedly at first the alliance was a natural condition rather than a conscious intent, the two being incidents of the same general situation but not at once nor even for many years deliberately associated. That their deliberate association was sure to come in the fullness of time and that, all the more because based on a natural condition, it would bring momentous consequences must go without saying; but, before pointing out what those consequences were, how they even brought the reign of science to its close, I must call attention to one or two other things of considerable importance. With the change from art to science, from sensitive civic life to commerce, from a still substantial to an only formal conservatism, from a more or less sentimental to a freely rationalistic cosmopolitanism, with this change the status both of the ordinary foreigner in the city and of that other foreigner, the citizen, whose interests when not openly then privately were now really outside of State and law, was very materially modified. Foreign merchants and foreign scholars were constantly present in force and were treated with marked respect, or, to say the least, they secured good prices or salaries. Breakers of the law more often paid fines than suffered open and personal or bodily punishment and not infrequently they escaped punishment altogether. Even in treaties between rival communities or with foreign races indemnities generally took the place of cessions of people and territory. In short, for those without the law and for those at least nominally within it rational and commercial calculation was the rule. Men met even all offences, not with blows nor any longer with obvious however nicely controlled anger or resentment, but, to speak somewhat figuratively to the

general situation as well as literally to many specific cases, with nicely calculated bills of damages, which were or were not paid according to the way in which the facile machinations of the contemporary law happened to turn. In short, the new status showed the life of all, let us say of the foreigners abroad and of those at home, largely if not wholly "commercialised". The law was commercialised. Even morality seemed so, in that personal relations and services all had their prices. Human association was commercialised, as was shown in the decline of individual enterprises and the rise of what in our time have been known as "soulless corporations". Still, not to enlarge upon this result of the rationalism of the time, it undoubtedly implied progress, for it had come about only through a widening and deepening of human interest and action; it contained rich opportunities of large and vital human achievement, for it showed reason superior to sense and mediation to immediacy in expression; but, as always with progress and achievement, there was cost. With all the hopes of the time, all the opportunity and, I do not hesitate to say, all the certainty of achievement, greed, corruption, inhumanity were conspicuous in every department of life. Certainly the conflicts of reason and mechanical skill involved much disaster. The battle-fields were strewn, not indeed with bodies and their decay, but with characters no less malodorous. Yet possibly there may have been at least as much merit in falling in these battles as in those others.

But it must not be forgotten that side by side with the rationalism, theoretical or practical, and with the hard, subtle, vital conflicts which this fostered there was a newly assertive religious life. At least one historian, I know, has written of the Humani at this time as an unemotional people, declaring that their reason and calculation had wholly supplanted their former emotionalism. Such a view, however, is superficial and laughable. Apart from the real although undemonstrative interest and zest of which much has been said here, there was positive emotional expression in what in general should be called an assertive religious mysticism. This mysticism had several ways of showing itself. Sometimes men turned from the accepted religious rites and beliefs to nature and then the attitude was pantheistic. Sometimes in a reactionary spirit they revived and reasserted the traditional symbols and rites and, passionately pressing these, as it were, close to their very hearts, seemed to lose themselves wholly in the life of Him they worshipped. And sometimes, without any conscious resort to nature and yet with insistence

that old forms only hindered man's approach to God, they declared themselves as feeling God's immediate presence. Still, whichever of these or of certain other forms the mysticism took, the result was always unorthodox and in certain quarters was as much decried as rationalism itself. Was not the individual taking his religion into his own hands? And, for the rest, the general movement, although outwardly seeming to affect relatively small portions of society, really showed how emotionally real the whole life of the time was and how the emotions of it, human experience being deepened with the passion of all nature, at times simply had to come to the surface.

Now to return to the central fact of this chapter, to the alliance of candour and utility, of science and commerce, although at first this was, as said, natural rather than conscious and deliberate, it was bound to become conscious. If nothing else, at least what the novelists have called propinquity would take care of that, sooner or later awakening direct interest of each in the other; and a conscious alliance of candour and utility quickly made certain a change of reign if not open revolution, being fatal at once to objective rationalistic science and to commercial stability and calculation and in general hopelessly unsettling every form of reserved and conservative exploitation. The reign of science, although enduring many years, was thus as transitional as either of the two earlier reigns had been. Under what conditions, however, the final change came about must now be explained carefully. The romantic metaphor which I just allowed myself may have been entertaining, but it has not made all things plain.

We have found that the Humani were still, but in a certain prosaic way, conservative. Both their science and their commerce have been seen to have required that the existing organisation of society, although no longer an object of sensitive concern, remain intact. Yet in all those things of which the life of a society is made, religion, morals, politics, industry and hygiene, their candid science was constantly getting results which, if applied, would call for startling changes, and their commerce, although based on utility, was in point of fact not yet really and freely using or spending the life and the instruments and treasures of all sorts which the past had given. The situation, then, distinctly was an unstable one, for, hard as it always is for a people—as well also as for an individual—to release for free, full use what life has put in hand, sooner or later the conservatism has to yield. *Sooner or later among the*

Humani the larger candour of unhesitating application and the freer use of uncalculating expenditure had to come. The people outgrew even their prosaic loyalty to the past and lost themselves or found themselves—which should I say?—in a general humanity that seemed to know no country and no traditions, no boundaries of life narrower than those of nature.

May I put this a little differently, using another metaphor? In the peculiar conservatism of the Humani during their reign of science, whether we see it in the only objective candour of their science itself or in the special reserve of their commerce, there was a certain suggestion of the miser who hoards what is meant, and sometime in the future is sure, to be spent or used freely. Whatever future history may have in store, in the past no people has ever worked and built for itself alone. It seems natural, too, for any people in due time to become rationalistic, commercial, utilitarian, exactly as was the case with the Humani. Even so, however, they are still living for themselves and therefore are miserly. Nor in calling an age of science or commercial utilitarianism miserly would I imply only opprobrium. That miserly conservatism coupled as it was with the notion that science or intellectualism generally was a life by itself and that commerce on its side was the mere selfish exploitation of all available resources, not a naturally free and adequate development of them, had a certain real value, since undoubtedly new and radical ideas should not affect life until most carefully worked out and the various resources, moral and intellectual, available in a people's life should not be released or appropriated by man or by history for free use until thoroughly elaborated and tested. *Persona non grata* as the miser is, his planning without acting, his mere hoarding of the means by which he might carry out his plans, and his self-centred zest over his treasure, over its glitter and its ring, are only morbid and exaggerated expressions of things in general life that do possess undoubted worth; of such things, for example, as looking before leaping, cultivating and accumulating before using, and knowing the value of what you have before you really release it for use. Wherefore, although their conservatism was suggestive of the miser, although greed and corruption, not to say also other offensive marks of the miser's morbid condition, were much in evidence, although in what above was called their free rich routine or in their bold indifference to accident or destiny they seemed to be looking even without any thought of ever leaping forward and cultivating and accumulating even

without any impulses to freer and more vital use, nevertheless that conservatism of the Humani served a true purpose. In its staid, eminently respectable intellectualism and its equally well-controlled utilitarianism there was a great training of mind and preparation of resources for wider and fuller life. But of course the long check upon the forward movement had finally to give way. No miser can live for ever. After his death candour and utility do face each other. New ideas are put into action. Developed utilities are made, no longer the medium of routine, but the means to new life. And so it was with the Humani, their miserly conservatism passing.

As it passed, as the prosaic letter of their life no longer restrained them, the spirit, always so much larger and deeper than the letter, was liberated. Realisation or liberation of the spirit is indeed probably the best way in which to describe the change that marked the conscious alliance of candour and utility and that brought a new reign to the Humani. The liberated spirit could accept the negative results of science, as the letter, the old law and order, could not, and the liberated spirit could also relinquish to free use, to natural or universal instead of to locally human use, to use without conservative calculation, all the accumulated powers and treasures of the people. The liberated spirit, also, could finally break down, not merely the distinction between the Humani and nature, but also the traditional barriers between the Humani and other people. Whence there came no condescending cosmopolitanism, like that in the days of art, nor yet any candid but calculating local interest in the world at large, like that in the days of science, but a life that was itself world-wide and a thought that was too open-minded to be only objective and exact.

Art, it will be remembered, had to see its own peculiar interest, the beauty of its human works, so sensitive with human life, lost—or fulfilled?—in something larger, in the freer beauty of nature, its humanly centred productions becoming only incidents in a whole that was alive with the sensitive metaphors of any centre or of a wide and free centre —how did we put it?—and now, but on a different plane, on the plane of reason instead of sense, science was brought to a similar experience and to the tragedy of such an experience. Science's regard for the objectively, outwardly true had to give way to regard for the naturally and essentially true, for the true without the manifest restraints of an outward objectivity and inner reserve. And, sympathetically, commerce had to give way to something very like abandon.

In a word, to conclude, the Humani turned, no longer conservative and objective, but speculative; in thought, philosophical; in affairs, open-handed; becoming in thought or act spenders of civilisation, not mere thrifty savers of it. They were almost naked, too, and natural; no longer, except for the thinnest of covering, clothed or disguised. Indeed they were very near to being a people without a country, lacking any visible religion, government, social ties or any of the usual formal restraints of life. And yet, with all that they were losing or sacrificing, they had won or soon were to win far more, or at least the chance of far more, by the change, and there can be no doubt that their past with its law and its art and its science and with the active life which these had presided over had schooled and trained them well for the new trials which were now before them and which must be met before the greater chance opened to them could be seized successfully.

Still, as the change put philosophy at the head in place of science, the account of what came of it must wait for another time.

III.—PERCEPTION AND INTERSUBJECTIVE INTERCOURSE.

By William W. Carlile

"The common world," says Schelling, "arises by the co-operation of many intelligences". The remark embodies a conception which, unless I am much mistaken, has a great future before it in philosophy. It is that of the transformation that the immediate presentations to the minds of individuals undergo at the touch of intercourse with their fellows. The fact of the transformation has been dwelt on by Dr. Ward in the sixteenth and seventeenth of his earlier Gifford Lectures published under the title of *Naturalism and Agnosticism*. I find his reasoning put in a compendious form well suited for quotation by his reviewer in the *Hibbert Journal*,[1] Dr. Dawes Hicks.

After remarking that within the circle of purely individual experience there emerges no distinction between the real and the phenomenal, the writer goes on to say: "That distinction only comes to have significance when the advance is made from the point of view of individual experience to that of universal experience. When ten men look at the sun or moon, they all, according to Reid, see the same individual objects, whilst according to Hamilton, each of the ten sees a different object. From the standpoint of individual experience Hamilton is right; from the standpoint of universal experience the truth lies with Reid. The transition from the 'immediate' object of individual experience to the 'mediate' object of universal experience is effected mainly through means of intersubjective intercourse, and the various operations to which intersubjective intercourse gives rise. The common knowledge which results is, in reality, a continuation and extension of individual knowledge, but so far as the theoretical knowledge of Nature is concerned, intersubjective intercourse leads, inevitably it may be said, to the omission of that reference to a knowing subject characteristic of the

[1] October, 1905, p. 197.

objects of individual knowledge. The *one* sun which is the common object of ten men looking at it, since it is not the peculiar object of *any one* of the ten, comes to be considered as independent of them all collectively, and of consciousness generally. From this fallacy of naïve realism to the dualism of matter and mind the step is not great, the mediate object comes to be conceived as a thing in itself, that produces by its action the percepts of individual experience, and the latter are falsely pictured as being subjective modifications of the individual mind."

But is there any fallacy whatever about the reasoning here described as that of naïve realism, one cannot help asking with all due deference to so sound and so eminent an authority as Dr. Ward. He likens it to an argument to the effect that a collective body such as the House of Commons might be held to exist even though we suppose each and all of its members non-existent. It is impossible to concede the validity of such an analogy. The fact that causation must be taken account of puts it into another category altogether. The discovery by myself, say, of the simple fact that the sun, or any other outward object, exists for my neighbours in my absence is at any rate one of the facts which operate in taking the presentation out of the temporal flux of ideas and in giving it a place among the things, objects, or substances of the world, which, in a word, convert the feeling into the thing felt.[1] Is there any fallacy, we may ask, in the primitive conclusion of dawning consciousness that an impression known to be the same for me and for my neighbours is an impression caused by something that is still there when both I myself and any number that we please of those neighbours may be supposed as absent, asleep or dead? Or, again, is there any fallacy in asserting that this last conclusion tends to the establishment of the fact that such an impression is not the creation of my own mind working in solitude, but, on the contrary, is something that somehow or other stands apart from it and is independent of it altogether.

When Mill, clinging to his conception of the outward object as "a possibility of sensation," yet has to concede that we must recognise the fact that one possibility of sensation, which we call fire, can, in our absence, melt another possibility of sensation which we call wax, does not the thought

[1] Prof. Stout thinks with Berkeley that "the explanation of the fact that the presentation continuum of the individual is continued beyond itself into a whole of fundamentally like nature which transcends and includes it" is "that presentations which do not exist in my mind exist in other minds" (MIND, N.S., 77, p. 13).

force itself upon our minds that the game is up, as far, at any rate, as his variety of idealism is concerned; and that he, under cover of the clumsy synonym "a possibility of sensation," has really conceded the existence of all that any of us ever meant or mean by the object of the outward world.

Leaving on one side, however, for the moment, the general controversy between realism and idealism, that which it is worth while especially to call attention to at present is the transformation, so clearly realised by Dr. Ward, and Dr. Hicks, that takes place in impressions under the influence of intercourse. Even here, however, one finds some features of the statement to which it seems necessary to demur. We are told that, from one point of view, Reid is in the right, from another Hamilton is in the right also. Reid thinks, as we all do, when we are not philosophising, that ten of us looking at the sun see the same sun, Hamilton thinks, on the contrary, that all of us see a different sun. He goes indeed farther than this and thinks that what we see is not the sun at all but only his image on the retina. Now, of course, the image on the retina—or rather the pair of inverted images—is something that science alone knows anything about, and to say that it is what we 'see' is to put a wholly impossible meaning on to that common word. The truth is that the transformation of impressions into objects takes place at an earlier stage in mental development than either Sir William Hamilton or Dr. Ward has realised. Dr. Ward places Hamilton's product of individual experience and Reid's product of what is described as universal experience side by side as things equally real and tangible. But the truth is that Hamilton's is something that cannot be said to exist for consciousness at all. The colour presentations of vision pure and simple have been already converted into the things seen before the stage of consciousness is reached. Hamilton's view thus does not appear to have any vestige of validity about it whatever.

Dr. Ward looks like getting to the root of the matter when he puts the case thus: "The question (that of the transformation of Hamilton's ten suns into Reid's one sun) naturally presents itself in the form: How does the one sun become an object to ten different men? Yet the proper form rather is—'How and in what sense, do the ten come to know that the actual object of each is the same individual object for all?'" To put such a question rightly is indeed half the battle. It leaves, however, the other half yet to be fought out.

Protagoras, it appears, was the first to grasp the fact that

"When several individuals perceive the same external object each has his own sense presentations, which as such are incommunicable to the others".[1] If they remained, however, from first to last always and altogether incommunicable to others, that is to say, if there were nothing that compelled unquestioning agreement between any two of us as to whether the thing that we were at a given moment speaking about and looking at was in very truth the same thing or not for both of us, if what we may call the intersubjective identification of the things of the outward world were definitely and finally impossible, then, we may ask, how would anything in the nature of objective knowledge be possible at all. None of us really doubt, as James says, that when we are looking at the sun it is the same sun that we all of us see. Whence, however, comes this certainty? How, in other words, is intersubjective identification possible?

Dr. Ward, so far as I have been able to discover, does not attempt an explicit answer to his own question, but contents himself with pointing out the difficulty or impossibility of giving a fully adequate one. To formulate a fully adequate answer may indeed be difficult. At the same time I think that some suggestions are possible that give us a glimpse of the direction in which such an answer is to be looked for.

"Our first investigation into the nature of reality might properly take the form of inquiring, What is it that happens when we first learn the signification of the word 'Real' (say as applied to this pen that I hold in my hand)? In the first place it is plain that there must be intercourse. The solipsist standpoint is wholly inadmissible. The sensations of an isolated being would never emerge into consciousness at all. Certainly they would never have names given to them. As to the nature of the intercourse in this particular case there is at any rate this much that happens. There is a group of muscular and tactual sensations peculiar to me, as I grasp the pen in my fingers, accompanied by an auditory sensation simultaneous for both of us as I say the word 'Real'; then a group of muscular and tactual sensations peculiar to you, and an auditory sensation common to both of us and recognised to be similar to the former auditory sensation, as you take the pen in your fingers and repeat the word to show that you understand and concur. The nature of the muscular and tactual sensations have been perhaps adequately analysed by experimental psychologists. I do not think, however, that this important difference between them and

[1] Prof. Stout, *Proceedings of the Aristotelian Society*, 1908-9, p. 238.

the auditory sensation has been explicitly pointed out, *viz.*, that whereas such sensations as the auditory one are open to the experience of an indefinite number of people at once, the muscular and tactual are confined to the experience of one at a time. You cannot hold the pen while I hold it—the same part of it at any rate—without displacing me. This fact is, I think, the foundation of the distinction between the primary and the secondary qualities of matter. It is that which subsequently becomes elaborated into the thought that two bodies cannot occupy the same space at the same time. On it is based the very possibility of the denotation of words, of pointing out anything. The ultimate meaning of the words, 'The same thing as between you and me,' is 'The thing that I now lay my finger on, and that you cannot lay yours on without displacing mine.' If you could, your finger would occupy the same space that mine occupied at the same time. As vision is a compound of muscular and colour sensations, it holds, in respect of this peculiarity, an intermediate position. I can see a face without displacing you, but not a face strictly in profile while you see it strictly in profile. As a result of this, pointing out, as a means of indicating, comes to be substituted for touching."

The last paragraph, I may remark, is reproduced from an article of my own in MIND of January, 1895, some seventeen years ago now. The portion of it that is especially in point in connexion with the present question is of course the contention that the ultimate meaning of the words "The same thing" as between you and me is "The thing that I now lay my hand on, and that you cannot lay yours on without displacing mine". Some view more or less similar to this was evidently running in Lotze's mind when he points to the ultimate contrast between inner states and material things, as lying in the fact that the former cannot like the latter "be separated from their original possessor and passed on as they are from hand to hand" while material things are, in the last resort, the things that can be so dealt with. It is, to quote again briefly from the same paper in MIND, "in this capability of being passed on from hand to hand that both 'objectivity' and identity primarily consist. I know that a colour or a sound is one thing to me, and another more or less similar thing to my neighbour. How, on the contrary, do I know that an inch measure is precisely the same thing for him as for me? The explanation does not lie in any peculiarity of the primary sensations caused by the inch measure. I could have no assurance from the nature of the sensations that it produces when pressed against my palm

that they would be, in any sense, the same as those which it would produce when pressed against your palm. Indeed, I might be quite sure that they would not. In what then does the sameness consist? In the fact that the measure occupies the same space for you as it does for me; and that, in its ultimate analysis, means simply this, that you cannot hold it in your hand while I hold it in mine. Once we have got the length of finding things which are the same as between us, measurement becomes possible, and thenceforward all accurate quantitative knowledge."

Intelligence, as M. Bergson acutely remarks, has for its object, in an especial manner, the unorganised solid, and, beyond question, a profound change comes over the whole of our mental experience as soon as we grasp the simple conception of the "Thing," the object which exists and possesses identity for two or more people at once. Among the mental processes and products that then, for the first time, become possible are denotation, naming and language. What may be called absolute position too then emerges, position determined by the intersection of innumerable lines having their points of departure in innumerable human subjects, now, perhaps, at length capable of comparing notes with each other. The "object," an island in space, gives us then also the conception of the "particular," numerically different from other particulars, though otherwise indiscernible from them. It gives us thus the conception of unity, and with it of number, that is of unity indefinitely repeated, and so arithmetic is born. It makes possible too, I think, the conception of substance, the substratum of all qualities, the subject of all predicates.[1] Empty space now also becomes recognisable as the interval between objects, while matter is found in their felt resistance to our motor activity, now moreover for the first time made capable of being compared with the similar resistance experienced, in identical circumstances, by other subjects.

We are led thus to the conclusion that what we call the primary qualities of matter are the products of this intersubjective intercourse while the secondary qualities of matter, on the contrary, can be reached at the stage of simple individual sensation. The former, unlike the latter, thus necessarily contain, even when first recognisable by us, a large element of inference, of thought, of reasoning; and we may, perhaps, now be ready to recognise how wise and how

[1] All nouns of course are not the names of solid objects, but all are, in a sense, modelled on the solid object as their type.

true were the instincts of our great philosopher, Locke, when he placed them in a category of their own, well distinguished from the secondary ones.

We can see in a clear light, I think, the width and the depth of the gulf that separates the two classes if we will but duly consider Hume's famous example of the straight stick that appears as bent in water. The bent appearance is palpably illusion, says Hume; and, following Berkeley, he goes on to argue that all the information that can be brought to us in any shape through the senses about the outside world is something that is precisely similar to it in character. But how is it that we can be so certain that the bent appearance of the stick is illusion? How but by comparing it with the information given us by taking the stick in our hands and feeling it? But if that is so, we plainly assume that feeling the stick, passing it, perhaps, from hand to hand, ends in giving us information about its form that is absolutely valid and trustworthy. We would not, indeed, have the conception even of illusion itself, as Dr. Ward, somewhere, very justly remarks, if we had not in some shape or other something that provided us with a standard of truth and reality with which to compare it.

We find in the Kantian system a remarkable inversion of the nature and function of these primary and secondary qualities. Unity, quantity, extension, shape, position in space; all these and others like them are set down as forms of sensibility, as something miraculously conferred on us at birth. They are *a priori* and subjective; they are the qualities of that which is phenomenal alone as contrasted with the world of reality constituted by things in themselves. What are they, however, but Locke's Primary Qualities of matter? Deduct them from the total of the information given us, apparently at any rate, by sense, and what is left? What can be left but the secondary qualities?[1]

Are the secondary qualities then—in Kant's language, the matter of sensation—that which alone gives us any glimpse of reality, of the causality of things in themselves, to which we can conceivably attain? The conclusion, if we are forced to draw it, is certainly an amazing one, and it is not surprising that, in these circumstances, post-Kantian speculation very soon dropped the "matter of sensation" and the "thing in itself" altogether, and fell back on the conception of the whole outward world as being the creation of conscious-

[1] Even touch and the muscular sense yield only secondary qualities apart from intercourse.

ness. With Descartes what corresponded approximately to the primary qualities were the *modi rerum*, to the secondary, the *modi cogitandi*. With Kant, whatever the secondary were, the primary, as we well know, were nothing but the *modi cogitandi*.[1]

I have referred above to Mill's conception of the permanent possibility of sensation. The truth is that the use of the abstract noun "possibility," meaning, of course, primarily, the fact of being possible, with an indefinite article prefixed to it as the designation of something conceived of as a particular is more or less of a solecism. What term then, it may be asked, would it come natural for us to use in the circumstances. What other than the term "Cause"? We cannot help thinking of the fire as the cause of the melting of the wax, nor can we help thinking of both the fire and the wax conceived of as things or objects that are the same for all of us as in truth the causes of the visual appearances that they present to each. "The purely hypothetical causes," some one will answer. But is this really so? When we take an example from the sensations of sound it comes perfectly natural to us to speak or think of the waterfall, let us say, as the cause of the sound that we hear as we approach it. To call the rose, however, the cause of the visual appearances that it presents to us does not, no doubt, sound quite so natural. We have probably been thinking of the rose and its appearance as one thing, not as two which are capable of correlation with each other as cause and effect. We think of the reddish or yellow colour as a quality of the rose which we may regard as being itself the substance, the substratum that underlies all its qualities. We are thus led to the conclusion that substance and quality are really at bottom cause and effect under another name. In sound we call that cause and effect which in vision we call substance and quality. The difference lies mainly in the instantaneousness with which the emergence of the secondary quality, colour, follows on the thing behind it, as compared with the comparative slowness with which the secondary quality sound, follows on the thing which is behind it.

If, however, we can quite legitimately ascribe the sound to the waterfall as its cause, what is there that is illegitimate in ascribing the colour of the rose to the rose itself as its cause? Here, however, the objection is raised that the cause referred to in the second case is something non-existent. You

[1] At the same time it must be said that Kant's view usefully emphasised the element of thought in the primary qualities.

have an orange, say; take away its qualities one by one, its colour, smell, roundness, consistency, extension and what is left? Nothing. What then can your rose be which you call the cause or the substratum of its colour?

This reasoning depends for any apparent cogency that it possesses upon the tacit assumption that—as in the case of Hume's stick apparently bent in water—the primary and secondary qualities of matter are things that stand upon the same level with each other epistemologically. We found, on the contrary, in the former case that the primary qualities represented the reality by comparison with which alone it was possible for us to pronounce the secondary ones illusion. Take away, along with colour and smell, *compared* extension and *compared* resistance, and of course no substance is left. But then are not compared extension and compared resistance the very things to which the experience of the race has given the name of substance? In other words may they not be justly regarded as being that which furnishes us with the conception of the "Thing," the outward object endowed with an existence independent of our own, and thus capable of being the cause of our sensations.

As regards this genesis of the concept of the 'Thing' two views are possible, one that it is a process of ideal construction, in other words, of creation, another that it is a process of discovery. The former is, no doubt, the more usual view. The only writer, so far as I am aware, who has given distinct expression to the latter is Prof. Alexander. "The apprehension of things which are not mental," he says, "is a process of discovery and not in any sense of creation".[1] We have called it a process of inference. Let us compare with it other cases of inference. In doing so we must note that it is the more developed type of inference that is the familiar fact and that in conceiving of the co-ordination of the sensations of vision with touch transformed by intercourse as inference we are likening this more primordial but really less familiar and less easily understood fact with developed inference as the more easily understood one.

Take the often-used example of the Island. How do we prove, say, that Great Britain is an island? By sailing round it. We have as our major premise or general rule, implicit rather than explicit perhaps, "sea surrounded lands are islands". Then as we accomplish the voyage and come in sight of the port that we started from, our minor emerges: "This land is sea surrounded". Thence we conclude "This

[1] *Hibbert Journal*, Oct., 1909, p. 58. He regards, at the same time, as not mental much that I cannot help regarding as mental.

land is an island". Again, let us ask, How did we get the conception of an island originally? The answer is again: By sailing round lands which can be sailed round. This operation sufficiently often repeated and reflected on generated the concept of the Island, and in time that name was assigned. We are thus led to conclude that the process by which we prove a fact once a name has been assigned, is *the very same process* as that by which we generate a concept before any name has been thought of. Apply then the same principle to the Thing, the outward object which exhibits the commonplace reality of naïve realism. How do we prove that any appearance corresponds to a reality? By touching and handling the thing to which the appearance corresponds if it is within our reach. But it may be said, the touching and handling as well as the seeing might all take place in a dream. Is there then any further method of proof to which we can resort. There is; we can say to our neighbours, Come and feel and handle this alleged thing also, and tell us how it presents itself to you. If they do this and pronounce it real, that, we conceive, settles the question. But why? Simply because common consent entered originally into the genesis of the thought of reality. Proof and genesis again are found to be one and the same thing. Both are the products of intersubjective intercourse.

Here, however, an interesting point is to be noted. The proof of insularity, as we have seen, is the same thing as the genesis of the concept "Island". Turn again, however, to the primordial inference in regard to the Thing, and we find it commonly alleged that the proof of Thinghood or reality is the same not as the genesis of the *concept* of the Thing, but actually as the genesis of the actual Thing itself. No one of course asserts that sailing round land creates the very land itself which we call an island, but many assert that the mental processes through which the concept Thing emerges create the very Thing itself. If they do not create it, however, then plainly they should be viewed as processes of discovery rather than as processes of ideal construction.

"Being and reality," says Mr. Bradley, "are one thing with sentience," [1] and we know that this view is shared by many writers whose general system of thought is widely different from his. How does it square, let us ask, with the conclusions at which we have arrived?

In the case of the stick apparently bent in water there was, we found, a sort of sentience present which we could not

[1] *Appearance and Reality*, p. 146.

call reality but were forced to set down as illusion, and this conclusion if valid emphasises the divorce between mere sentience and reality. Every illusion, indeed, exists for the moment and on that ground you may, of course, if you please, ascribe to it a sort of reality of its own. But plainly the reality that is in point for us here is the reality that we contrast with illusion. It is reality in what we may call its *primary* meaning. The epithet "primary" is borrowed from jurisprudence,[1] and its unavoidable use points to the important conclusion that we have to recognise gradation in connexion with the meanings of such words. As M. Bergson remarks in a similar case, a class must be defined "not by its possession of certain characters but by its tendency to emphasise them". Mere sentience then plainly does not guarantee to us reality in its primary sense. It only gives us that conception indeed when it is combined with inference, when it is the sort of sentience that verifies an inference.

From Plato to Locke the conception that ruled in the world was that sensation alone gave us no true knowledge; that such knowledge was attainable by reason only. We are, perhaps, tending to come back some way in the direction of that conception in learning that even in the simplest perception of any outward object there is an element of reasoning, that no two of us can see the same sun by virtue alone of sensation pure and simple, and apart from processes of reasoning that are no less truly reasoning because they are so rapid and so early learnt that they seem to present themselves in the guise of immediate intuition. The aptitude for such reasoning has no doubt been born with us, and it is these aptitudes, not the full-fledged knowledge that arises from their exercise, that can truly be regarded as *a priori*.

Reality, in its primary sense, we are thus led to regard as the correlate of truth. Truth itself may perhaps in some sense be used as applicable to immediate feeling *per se* while it lasts, even if the feeling is one experienced in a dream; but it is obviously only in a secondary sense that it can be so used. Primarily it applies to assertions, and as these must be the assertions of our neighbours, it too is plainly a concept of intercourse. If we were alone in the universe assertions would be unknown. From the truth of assertions we take the conception and apply it to the truth of inferences. Whatever else inferences may be they are at any rate something that gives us information just as the assertions of our neighbours do,

[1] *Cf.* "The primary meanings of words and their extensions," ch. iv. of *Monetary Economics*, by the present writer, pp. 39-51.

information that may be true, or that, on the other hand, may turn out false. The primary conceptions of truth and of reality alike imply the possibility and the necessity of verification; and here we are brought in view of another conception which is also a correlate of reality, though from another point of view, the conception of knowledge. Like truth it is primarily a conception of intercourse, and refers to information given us by speech and subsequently verified by comparison with fact. From such information, as in the case of truth, we transfer the concept to inference. *A priori* knowledge is thus a contradiction in terms. Being knowledge it must be thought of as verified by comparison with fact, but being *a priori* it must be thought of as unverified.

In connexion with verification a point of some interest emerges. It is this, that we can verify nothing in the immediate present. Before we have time for such verification the present has become the past. Verification and with it thus necessarily truth, knowledge, reality and existence, appear all to have a future content. Say that this chair exists, what I really mean is that it will be possible for me or for any one to handle it, and then to experience the sensation of resistance, which ultimately warrants the thought of its existence. Existence thus when predicated in its primary sense means at any rate existence lasting on into the immediate future, and thus existence that is apart from sentience. Existence for the moment in the temporal flux would of course be quite unverifiable. Every assertion that we make about the real world as well as every inference that we draw has, if we look for it, a future reference. M. Bergson's view that the present is a device of conceptual thought, and that reality lies alone with the onward flow of temporal duration, thus seems to embody a truth that we have to reckon with. It seems very emphatically to negative the notion that reality and truth are or can be coincident with immediate sentience and with that alone.

The reality of the outward world is what naïve realism conceives it to be. The substance that underlies qualities, the causes of sensible impressions. It is not sensation only but something that more nearly approaches Mill's notion of the permanent possibility of sensation, the something inferred to be always there that has only to be approached and touched in order to generate sensation. If Hume's theory of causation had any validity we should call the appearances, which always come first whenever we handle material objects, the cause of the sensations of touch and resistance that ordinarily follow them. We do not do this because intercourse and

thought working on the basis of sense data unveil for us a world of permanently existing causes or things that are discovered to have priority to these appearances.

In the instances cited I have confined myself to the very simplest of the effects of intercourse on thought, to its operation in connexion with the genesis or the discovery, as we choose to conceive it, of the solid unit, the ordinary thing of the outward world. I have dwelt little on the use of language, though naming has, of course, always to be reckoned on as being there in the background "objectifying the subjective" as Lotze expresses it or, in Green's words, converting the feeling into the thing felt.[1] When we bring in language and consider its effect in moulding thought, not only in regard to external objects and their qualities, but also in regard to feelings, sentiments and desires, to what Locke would have called "mixed modes," a vast field of investigation and discussion opens up in front of us on which, however, in the present paper, it is impossible to enter.

Of all the philosophers with whose works I have any acquaintance either at first or at second hand Locke appears to me to be the one who was most consistently alive to the true *rôle* which the spoken word plays not only in registering but also in transforming both feeling and thought. It is noteworthy too that he seems to be always becoming more and more thoroughly awakened to the truth in regard to its action in these respects as his investigation proceeds. He tells us himself that, to begin with, he had no conception of the importance of words and of the part they played in mental operations. In the end, as we know, he finds it desirable to devote one large section of his work, his Third Book, to research in connexion with them. He appears to be always struggling with a fallacious conception, one indeed even at this moment very prevalent and very influential, to the effect that all questions connected with the meaning of words are merely verbal in the sense of being altogether trivial. It is a conception that applies to nomenclature as used in regard to streets or stars or racehorses, but not, I think to the gradually developed words which embody the no less gradually developed ideas of the race. In the later part of his Essay he appears to be reaching a contrary and a sounder view

As regards the scattered references to the question made by other philosophers we have Berkeley's recognition already

[1] "The moment it is named it has ceased to be a feeling and becomes a felt thing". *Green's Works*, vol. i., p. 264. The reference is to heat or flame.

noted of the effect on our thought of the fact that perceptions identical with our own exist for others. To turn to the Germans, it is worthy of remark that Kant regards his empirical reality within the field of phenomena as "that which is valid for the sensuous faculty of every human being". I opened the paper with Schelling's utterance to the effect that "The common world arises through the co-operation of many intelligences". Perhaps that observation again was suggested by Fichte's remark that "Only of that which others testify to me do I know that it is not my (dream) world but is the real world". Coming to more recent speculation we find Fechner saying "We have no reason whatever for supposing that there exists more of the corporeal world than the combination of phenomena which is governed by laws, and which exists for more than one unit of consciousness at the same time". Fechner too thus appears to hold that the identity of presentations for various minds, furnishes in large measure the basis of all that we can call reality.

The history of the categories since Kant has again some bearing on our general conclusion. We find Herbart maintaining that when rightly treated they coincide with the forms of language, while Trendelenberg contends that the Aristotelian categories themselves were based on the analysis of the sentence. Lotze's view is similar to Herbart's and it is one, as we know, that plays an important part in his system. He alludes playfully to Kant's conception of "thought as standing fronting the impressions as they arrive with a bundle of logical forms in its hand uncertain which form can be fitted to which impression and therefore needing some special expedient to discover how to pair them properly". In his own system, when all is said and done, we find substituted for the elaborate machinery of the categories and their schemata the conception of the presentation continuum as finally articulated into things, properties and events corresponding to the nouns, adjectives and verbs of common language. In other words we find the world of individual experience conceived of as transformed through the exigencies of intercourse into the world of common experience which we call the world of reality.

IV.—IMPLICATION AND THE ALGEBRA OF LOGIC.

By C. I. Lewis.

The development of the algebra of logic brings to light two somewhat startling theorems: (1) a false proposition implies any proposition, and (2) a true proposition is implied by any proposition. These are not the only theorems of the algebra which seem suspicious to common sense, but their sweeping generality has attracted particular attention. In themselves, they are neither mysterious sayings, nor great discoveries, nor gross absurdities. They exhibit only, in sharp outline, the meaning of "implies" which has been incorporated into the algebra. What this meaning is, what are its characteristics and limitations, and its relation to the "implies" of ordinary valid inference, it is the object of this paper briefly to indicate.

Such an attempt might be superfluous were it not that certain confusions of interpretation are involved, and that the expositors of the algebra of logic have not always taken pains to indicate that there is a difference between the algebraic and the ordinary meanings of implication. One may suspect that some of them would deny the divergence, or at least would maintain that the technical use is preferable and ought generally to be adopted. As a result, symbolic logic appears to the uninitiated somewhat as an *enfant terrible*, which intimidates one with its array of exact demonstrations, and demands the acceptance of incomprehensible results.

In the algebra of logic, 'p implies q' is defined to mean 'either p is false or q is true' [$(p \supset q) = (\backsim p \vee q)$ Df.].[1] But

[1] I choose this form of the definition partly because it is the one used in the most economical development of the calculus of propositions—in the *Principia Mathematica* of Russell and Whitehead—and partly because of its convenience for the discussion in hand. Other defined equivalents of '$p \supset q$' are:—

(1) $p = pq$ (the assertion of p is equivalent to the assertion of p and q both);

(2) $\backsim (p \backsim q)$, or, $p \backsim q = o$ (that 'p is true and q is false' is a false assertion; or, the proposition which asserts p and denies q is false); and

this last expression is equivocal. Implication is defined in terms of disjunction, but 'either—or' propositions may have at least three different meanings. One of these is ruled out when we understand that 'p or q'—either p is true or q is true—must not be taken to exclude the possibility that both p and q may be true. Disjunctions in the algebra do not signify mutual exclusion. If p be true, it is not implied that q is false. A convenient statement of this takes the form, "*At least one* of the propositions p and q is true". Two meanings of disjunction still remain. The implication of the algebra of logic bears the same relation to the one of these that the Aristotelian "implies" bears to the other. Hence the need of distinguishing carefully between these two sorts of disjunction.

Compare, if you will, the disjunctions: (1) Either Cæsar died or the moon is made of green cheese, and (2) Either Matilda does not love me or I am beloved. In both cases, at least one of the disjoined propositions *is* true. The difference between the two may be expressed in a variety of ways. The second disjunction is such that at least one of the disjoined propositions is "necessarily" true. Reject either of the possibilities and you thereby embrace the other. Suppose one of its propositions false and you are in consistency bound to suppose the other true. If either lemma *were* false, the other would, by the same token, be true. None of these statements will hold for the first disjunction. At least one of its propositions is, as a fact, true. But to suppose it false that Cæsar died, would not bind one to suppose the moon made of green cheese. If 'Cæsar died' *were* false, the moon would not necessarily be made of green cheese,—if conditions contrary to fact have any meaning at all. It is this last which the algebra is, according to its meaning of disjunction and implication, bound to deny.

The most significant distinction, however, remains to be noted. The second disjunction is such that its truth is in-

(3) $(p \vee q) = q$ ('either p is true or q is true' is equivalent to 'q is true').

It comes to the same thing in the end, whichever one of the four mentioned definitions of implication be chosen. Any one of them may be deduced as a theorem in a properly constructed system which adopts any other at the start. The choice depends solely upon the method of developing the particular system (see Whitehead, *Universal Algebra*, p. 40).

The symbolism which will be used in the paper is that of the *Principia Mathematica* with slight modifications. The letters, p, q, stand for propositions or 'propositional functions'. $\supset$ signifies 'implies'. $\vee$ is the sign of disjunction. $\backsim p$ may be read 'not-p' or 'the negation of p' or 'p is false'. Similarly p may be read as written or as 'p is true'.

dependent of the truth of either member considered separately. Or, more accurately, its truth can be known, while it is still problematic *which* of its lemmas is the true one. It has a truth which is prior to the determination of the facts in question. The truth of 'Either Cæsar died or the moon is made of green cheese' has not this purely logical or formal character. It lacks this independence of facts. Its contradiction would not surprise a logical mind unacquainted with history.

It requires careful analysis to separate these two meanings of 'either—or' propositions, though their main features may seem sufficiently distinct. We may call disjunctions like (1), whose truth cannot be known apart from the facts, extensional disjunctions; those of the type of (2), whose truth can be known while it is still problematic which member is true,—or whether both are true,—we may call intensional. These two may be further distinguished by considering their negatives. If one take 'Either Cæsar died or the moon is made of green cheese' to be a false statement, one may mean thereby that a certain relation is falsely asserted of the two propositions 'Cæsar died' and 'the moon is made of green cheese'. If Smith asserts, "Either my name is not Smith or this is my hat," one might reply: "No, you are wrong; there may be other Smiths in the hall with names in their hats". One does not deny that Smith knows his own name, or that this is his hat. One denies only that his statement exhausts the possibilities. The negative of intensional disjunction is, thus, the negation of the disjunctive relation itself and not the negation of either member. To take another example: (3) Either London is in England or Paris is in France; one may deny that any "necessary" disjunction is here involved, though either half of the statement by itself is true. If either member of the disjunction *were* false, the truth or falsity of the other would not thereby be affected. Perhaps we cannot ever be certain of the possibility of such a contrary-to-fact condition. Still we *know what we mean* when we suppose it. The negation of intensional disjunction is, then, the negation of a logical relation of propositions, and is entirely consistent with the truth of one or both of the disjoined assertions. One denies only that the disjunction has any truth apart from the facts in question.

The negative of extensional disjunction is the denial of *both* its members. Taking 'either—or' in their reference to extension, neither (1) nor (3) can be denied. The truth of extensional disjunction is secured by the truth of either

member, regardless of "logical connexions," and the negation of extensional disjunction accordingly negates both the disjoined propositions.

That the meaning of disjunction in the algebra of logic must consistently be confined to the extensional, follows from the fact that, in the algebra, the negative of a disjunction is the negation of both its members $[\backsim(p \mathbf{V} q) = \backsim p \backsim q]$,[1] and the negative of a "product"—*e.g.* 'both p and q are true'—is the disjunction of the negatives of its factors $[\backsim(pq) = (\backsim p \mathbf{V} \backsim q)]$.[1] Every intensional disjunction is also extensional, or, more accurately, the intensional disjunction of p and q implies their extensional disjunction also. But the reverse does not hold. Of every intensional disjunction, at least one member *is* true; but not every 'either . . . or' proposition with at least one true member is an intensional disjunction. If, however, any one suppose that the algebra can treat of intensional disjunctions "because they are a special class of extensional disjunctions," let him consider the fact that, in negating *any* disjunction, the algebra negates both its members. If p and q are disjoined both extensionally and intensionally, still the algebra treats only of their extensional disjunction. That this is not mere "logic chopping" will appear when we come to convert disjunctions into implications.

Before leaving the subject of disjunctions, we should note two further characters of the intensional variety. A genuine intensional disjunction does not, of course, suffer any alteration of its logical nature if one of its members is known to be false, or one known to be true, or when both things are known. 'Either Matilda does not love me or I am beloved' loses none of its intensional character if it is discovered that Matilda does not, in fact, love me, or that I am actually beloved. In argument, one produces a dilemma[2] for the purpose of introducing later the falsity of one member and thus proving the truth of the other. The dilemma has the same meaning to the speaker who knows its solution and to the hearer who does not. Its character as intensional disjunction

[1] De Morgan's theorem.

[2] A dilemma *may be* an intensional disjunction with the restriction that its members cannot be true together. Extensional disjunctions admit of the same limitation while still remaining extensional. This last type, however, do not appear in discourse except as mere truisms or as figures of speech. Example (1)—Either Cæsar died or the moon is made of green cheese—belongs to this class. It is a truism, or—if meant to be taken as *intensional* disjunction—hyperbole. Thus we might have distinguished four types of disjunction instead of three. But the important division is that of intensional in general from extensional in general.

is attested by the fact that the hearer can know its truth before knowing its solution,—and by the further fact that both speaker and hearer, after reaching the solution, are still bound by the condition which turns out to be contrary to fact. If the true member *were* false, the other would necessarily be true.

Again, intensional disjunction is not restricted to the purely formal or *a priori* type of (2). Suppose a wholly reliable weather forecast for the 16th of the month to be "Warm". This implies that (4) either to-day is not the 16th or the weather is warm. On the supposition made, this is an intensional disjunction. One might know its truth even if one could not find a calendar and were suffering from chills and fever. But strike out the initial assumption and the disjunction becomes, if still true, extensional. Knowledge of its truth now depends upon verification of one or both of its members. We may say that extensional disjunction concerns actualities; intensional disjunction, possibilities. But one or more facts being given, the possibilities are thereby narrowed, and an intensional disjunction which is not *a priori* may be *implied*.

As has been said, intensional disjunction bears the same relation to inferential or "strict" implication[1] that extensional disjunction bears to the algebraic or "material" implication. Intensional disjunctions when converted into implications, according to the equivalence which the algebra states, become strict implications. Extensional disjunctions, by the same rule, produce material implications. In either case 'p implies q' is equivalent to 'either p is false or q is true,'—to 'either not-p or q'. [$(p \supset q) = (\backsim p \vee q)$ Df.]. Taking the intensional disjunctions: if we let p represent 'Matilda loves me' and q 'I am beloved,' example (2) states exactly 'either not-p or q'. 'Either Matilda does not love me or I am beloved' is equivalent to 'Matilda loves me implies that I am beloved'. Since 'either . . . or' states a reversible relation, we may equally well let p represent 'I am beloved,' and q 'Matilda does not love me'. 'Not-p implies q' will then read: 'I am not beloved' implies that 'Matilda does not love me'. By the same process, (4)—'Either to-day is not the 16th or the weather is warm'—may be transformed into, 'To-day is the 16th implies that the weather is warm,' and, 'The weather is not warm implies that to-day is not the 16th'.

[1] We may call this kind of implication "strict" at least in the sense that its meaning is narrower than that of the algebraic implication.

Remembering that (4) is an intensional disjunction only in the light of a certain presupposition, we may observe that, in this case also, intensional disjunction produces strict implication.

If p and q are intensionally disjoined, then,—whether p, or q, or both are, in fact, true,—if p were false, q would be true. The negation-of-p implies q in the ordinary meaning of 'implies'. Also if q were false, p would be true; p can *validly be inferred* from the proposition which negates q.

Examples (1) and (3) are extensional disjunctions. If we let p represent 'Cæsar died' and q represent 'The moon is made of green cheese,' 'not-p implies q' will read, 'Cæsar did not die' implies that 'the moon is made of green cheese'. Interchanging p and q above—since 'either . . . or' is reversible—we have, 'The moon is not made of green cheese' implies that 'Cæsar died'. Thus we get the implications of the algebra. The former of these is a good example of the sense in which a false proposition implies anything; the latter well illustrates how a true proposition may be implied by any proposition. By the same method (3) 'either London is in England or Paris is in France' gives us, 'London is not in England' implies that 'Paris is in France,' and, 'Paris is not in France' implies that 'London is in England'. Each of these last may be regarded as a case of a false proposition implying any proposition and, at the same time, of a true proposition being implied by any. *Any two true propositions whatever* might have been substituted for 'London is in England' and 'Paris is in France'; the implications would have resulted in the same way. The denial of the one would imply the other; the denial of the other, the one.

In order that it may be clearer that implication has, in the algebra, *no other significance* than that exemplified by the transformations of (1) and (3), let us consider what is involved in *denying* the algebraic implication relation. Take any false proposition, p—*e.g.* 'Rome is still burning'—and any true one, q—*e.g.* 'Christmas is coming'. At once the extensional disjunction 'either p is false or q is true' is satisfied —by the falsity of p alone, or by the truth of q alone,—and it follows that p implies q. $[(p \supset q) = (\backsim p \vee q)$ Df.]. To deny that p implies q is to deny the equivalent disjunction 'Either p is false or q is true'. $[\backsim (p \supset q) = \backsim (\backsim p \vee q)]$. To deny this disjunction is, according to the algebra, to deny the truth of both its members, *i.e.* to assert p and deny q. $[\backsim (\backsim p \vee q) = p \backsim q]$. Thus, if one would deny that 'Rome is still burning' implies 'Christmas is coming,'

one must assert that Rome still burns and deny the advent of Christmas.

Or we may take any two problematic propositions, as (p) 'Swift married Stella,' and (q) 'There are other universes beyond ours'. At once we can assert, according to the algebra, that if p does not imply q, q implies p. If p is false, that alone satisfies the extensional 'Either p is false or q is true' and proves that p implies q. Similarly if q is true. If p is true and q is false—the only situation for which p does not imply q—then it is at once doubly certain that q implies p. Of any two false propositions, each implies the other; and similarly, of any two true propositions, each is implied by the other. If one of two propositions is false and the other true, the former implies the latter. Either 'Swift married Stella' implies that 'there are other universes beyond ours,' or 'there are other universes beyond ours' implies that 'Swift married Stella'. And there is an even chance that the implication is mutual. Indeed the algebra of logic allows us to make these assertions prior to all knowledge of the content of p and q and apart from any consideration of what would ordinarily be called their logical import.

Most theorems in the algebra admit of being exemplified within the field of strict implications and intensional disjunctions. Aside from those which involve the negative of a disjunction, there are only a few which do not. All of these are the results of a single assumption of the calculus of propositions, the so-called principle of addition. This principle states that p implies 'either p or q'—if p is true, then either p is true or any other proposition, q, is true. $[p \supset (p \vee q)]$. We have already noted it in observing that an extensional disjunction is satisfied simply by the fact that one of its members is true. That this principle is formally false for intensional disjunctions is apparent when we note that—in the strict sense of implies—p does not imply that if p *were* false, any other proposition q would necessarily be true. From the fact that to-day is Monday, we cannot infer that if to-day were not Monday, the corn crop would be destroyed.

Assuming 'p implies (either p or q),' the proof that a false proposition implies any proposition is short and easy. Substituting not-p (p is false) for p, we have, 'not-p implies (either not-p or q)'. Replacing 'either not-p or q' by its defined equivalent 'p implies q,' not-p implies that 'p implies q,'—'p is false' implies that 'p implies any other proposition, q'. If or when p *is* false, the consequence 'p

implies q' follows. A false proposition implies anything. Resuming the proof in symbols: Addition— $p \supset (p \vee q)$. Substituting $\sim p$ for p throughout, $\sim p \supset (\sim p \vee q)$. $(\sim p \vee q) = (p \supset q)$, by definition. $\therefore \sim p \supset (p \supset q)$. The proof that a true proposition implies any proposition requires one additional principle—that disjunctions are reversible. $[(p \vee q) = (q \vee p)]$. Assuming that '$p$ implies (either p or q),' we may reverse the disjunction and get 'p implies (either q or p). Substituting not-q for q, 'p implies (either not-q or p)'. Replacing this disjunction by its equivalent 'q implies p,' the result is, 'p implies that q implies p'. If p is true, it is also true that any other proposition, q, implies p. A true proposition is implied by any proposition. Addition— $p \supset (p \vee q)$. $(p \vee q) = (q \vee p)$. Substituting $\sim q$ for q, $p \supset (\sim q \vee p)$. $(\sim q \vee p) = (q \supset p)$, by definition. $\therefore p \supset (q \supset p)$.

The existence of these two theorems in the algebra brings to light the most severe limitation of the algebraic or material implication. One of the important practical uses of implication is the testing of hypotheses whose truth or falsity is problematic. The algebraic implication has no application here. If the hypothesis happens to be false, it implies anything you please. If one find facts, x, y, z, otherwise unexpected but suggested by the hypothesis, the truth of these facts is implied by one's hypothesis, whether that hypothesis be true or not—since any true proposition is implied by all others. In other words, no proposition could be verified by its logical consequences. If the proposition be false, it has these "consequences" anyway. Similarly, no contrary-to-fact condition could have any logical significance, whether one happen to know that it *is* contrary to fact or not. For if the fact *is* otherwise, the proposition which states the supposition implies anything and everything. In the ordinary and "proper" use of implies certain conclusions can validly be inferred from contrary-to-fact suppositions, while certain others cannot. Hypotheses whose truth is problematic have logical consequences *which are independent of its truth or falsity.* These are the vital distinctions of the ordinary meaning of "implies"—for which 'p implies q' is equivalent to 'q can validly be inferred from p'—from that implication which figures in the algebra.

That the definition of implication in terms of extensional disjunction is in accord with any ordinary or useful meaning of the term can hardly be maintained with success. There can be, however, with regard to such a definition, no question of truth or falsity in the ordinary sense. As one of the assumptions or conventions of the calculus of propositions, the

definition represents only the exact statement of the way in which expressions are to be equated or substituted for one another. Provided it is possible so to equate them without contradiction, it is meaningless to call the equations untrue. We may, however, object to the definition on the ground that a more useful one is possible; and especially will this be the case when the system in question is one, like logic, which we wish to apply in some field of practical human endeavour. The present calculus of propositions is untrue in the sense in which non-Euclidean geometry is untrue; and we may reproach the logician who disregards our needs as the ancients might have reproached Euclid had he busied himself too exclusively with the consequences of a different parallel postulate.

Nothing that has preceded should be taken to imply that the algebra of logic is necessarily unequal to the task of symbolising such logical processes as those of inference and proof, or the more general processes which the algebra itself has the value of bringing to light. Our conclusions militate not against symbolic logic in general, but against the calculus of propositions in its present form. As a matter of fact, a few simple changes would remove all the "absurdities" from the present calculus and bring it into agreement with the strict meaning of implication. The principle of addition—p implies 'either p is true or q is true'—is the only one of an economical set of postulates of the present calculus[1] which is false for the intensional meaning of disjunction and, consequently, for strict implication. If this were removed, and disjunction confined—as a matter of interpretation—to the intensional variety, we should be well on our way to a new calculus. One other change would be necessary. The equivalence of "products" with the negatives of disjunctions and of the negatives of products with disjunctions [$pq = \backsim(\backsim p \mathbf{V} \backsim q)$, and, $\backsim(pq) = (\backsim p \mathbf{V} \backsim q)$] is inconsistent with the exclusion of purely extensional disjunctions.[2] The product pq—'p and q are both true'—would, accordingly, appear as a new indefinable, though capable of clear interpretation. In place of the principle of addition, the principle of simplification—'p and q are both true' implies 'p is true' [$pq \supset p$]—would be assumed. 'Addition' could no longer be deduced from it, as at present, when the negatives of disjunctions and products had no symbolic equivalents.[3] A careful analysis of what these

[1] See those of the *Principia Mathematica*, pp. 98-101.
[2] De Morgan's Theorem holds only for extensional disjunction.
[3] Both would still have important *implications*.

changes involve leads one to discover certain ambiguities and confusions which exist even in what ordinarily passes for sound reasoning.

An alternative and more fruitful method of developing the calculus of strict implication would be to retain both extensional and intensional disjunction, symbolise them differently, and define implication in terms of intensional disjunction only. The extensional disjunction would now have its negative in a product, as at present, and the principle of addition could be retained, but only for extensional disjunction. As a consequence, such theorems as 'a false proposition implies any proposition' would still not appear, but the principle of simplification $[pq \supset p]$ could be deduced instead of being assumed. This second mode of development would produce a calculus which retained all the theorems of the present one which hold for the ordinary meaning of implication, and would reject automatically those which appear to the uninitiated as "absurd". It would also be much wealthier in theorems than the present calculus, because of the fact that the intensional disjunction of p and q implies their extensional disjunction also, though not *vice versa*. And, owing to the distinction of these two meanings of 'either . . . or' propositions, this calculus would prove a valuable instrument of logical analysis. Its primary advantage over any present system lies in the fact that its meaning of implication is precisely that of ordinary inference and proof.

V.—DISCUSSIONS.

THE 'WORKING' OF 'TRUTHS'.

Mr. Stebbing[1] has been kind enough to take notice of my protests against the current false conversion of the pragmatist formula about the 'working' of 'truths'. He is so far as I know the first of the opponents of pragmatism to have done so in print, and as my disclaimer of the doctrine that 'all that works is true' dates from 1903,[2] I am proportionately grateful. But I could wish that his communication had been better *documenté* and had stated his 'refutation' of pragmatism more fully.

At present one has to take Mr. Stebbing's word for it both that "the whole significance of pragmatism as a theory of truth, and its claim to both novelty and importance, rests upon the possibility of this conversion," and that "pragmatism entirely fails to provide any criterion for distinguishing 'truth' from 'error,'" while the evidence that "this conversion is (*a*) repeatedly made by James, and (*b*) assumed by Dr. Schiller" leaves much to be desired, or imagined. To me at least neither is Mr. Stebbing's word conclusive, nor his evidence sufficient. Hence, though I naturally hesitate to contradict one who speaks with so great an air of authority and decision, I must seek to justify my protests. I hope at all events to cast a doubt on Mr. Stebbing's claim to understand pragmatism better than its authors.

(1) Seeing that ever since Aristotle logicians have been warning reasoners against the dangers of 'simple conversions,' it did seem to me surprising that it should always calmly have been assumed, ever since Mr. G. E. Moore asserted it in 1902, that when pragmatists *said* 'all truths work,' they *meant* 'all that works is true,' and had never heard, poor simple souls, of the existence of lies and errors. It never, therefore, seemed to me self-evident that it was the *pragmatists* who had been oblivious of a simple rule of elementary logic.

(2) I am astonished to learn from Mr. Stebbing that "no one would contest that 'all truths work,' *i.e.* are satisfactory from some point of view". When did the last philosopher become extinct who ignored the psychological side of knowing, and (*a*) extolled 'pure' 'disinterested,' useless and inhuman 'Thought,' (*b*) thought that there was *no* connexion between 'truth' and 'satisfaction,'

[1] In No. 83, pp. 471-472. [2] *Humanism*, p. 38.

and (*c*) thought that 'truth' was *wholly* conditioned by a relation to 'reality,' and entirely 'independent' of the psychical condition of the mind that apprehends it? This news had not yet reached me, and if Mr. Stebbing can give me authentic evidence of that philosopher's demise, I shall be happy to subscribe handsomely to a memorial tablet—or a cenotaph! Meanwhile, may I continue to think that to have argued the psychological *impossibility* of strictly 'disinterested' and completely 'useless' knowing is an important innovation which philosophy owes to pragmatism?

(3) Mr. Stebbing greatly disappointed me by not quoting more incriminating evidence from the now (alas!) very voluminous contributions of pragmatists to the theory of 'truth'. Indeed from me personally he seems to have taken just one phrase. The rest is 'dialectics,' in support of his assumption that the conversion is "assumed" by me "throughout". The one phrase quoted is taken from a preliminary description of how men do in fact proceed in awarding the epithets 'error' and 'truth,' which points out that actual practice conforms to the theoretic analysis of pragmatism. But it is *not* a statement of pragmatic *doctrine*, which, as I proceeded to show, is much less simple-minded than ordinary thought. In point of fact my initial account (1902) of the difference between 'postulates' and 'axioms' shows that I *never* imagined that a desire to have a thing true sufficed to make it true. I not only did not historically, therefore, but I could not logically, 'assume' that the sort of 'working' which consists merely in the agreeableness of a belief established its 'truth'.

James, similarly, *from the first* distinguished between the psychological 'Will to believe,' the logical 'right to believe,' and the verification of the beliefs thus *risked*, by experience of their working (*Will to Believe*, 1896, esp., p. 29). No doubt our critics have never paid the least attention to what we had said, and have always abandoned themselves to the guidance of their 'impressions' (*i.e.* prejudices), and have by now repeated their unfounded charges so often that they have come to believe them true; but if Mr. Stebbing is still young enough to have an open mind, he will see that these preconceptions prove nothing whatever against the existence of the authentic doctrine.

Mr. Stebbing, however, is rasher, or more honest, than the critics who dispense with '*Belege*'. He quotes two passages from James in support of his interpretation. The first (*Pragmatism*, p. 204), which in fact deals with the (different) questions of whether it is pragmatically important to distinguish *in certain specified cases* between saying 'it is useful because it is true' and 'it is true because it is useful,' and of what the word 'because' means in this connexion, is like the phrase quoted from me, *not* a statement of pragmatic doctrine but a comment on current phraseology. The context, "*You* can say" . . . "true is the *name* for . . . " and the beginning of the next paragraph, "From this simple *cue* prag-

matism *gets* her general notion of truth," which states the doctrinal inferences to be drawn from this situation, renders this so plain that Mr. Stebbing himself has here to abandon his case and can only say that James seems to him to come "dangerously near" to equating truth and usefulness.

His reliance on his second quotation, from *The Meaning of Truth* (p. 243) is still more surprising. For, in the first place, it does *not* profess to represent *James's own view*, but (a condensation of) *mine*. Secondly, it manifestly does not give any view of mine as to how we *ought* to think, but my analysis of how people *do* think. And I take it that it would be difficult for a philosopher of any school who is capable of understanding the psychological standpoint to deny that "what works is true and represents a reality, *for the individual for whom it works*". Clearly this holds of 'truth-claims,' and settles nothing about the social evaluation of such claims. Nor does the logical sting of my 'humanism' lie in my having perceived that individuals always begin by valuing as objectively 'true' whatever they find to have value for them,[1] but in the corollary that reasonable persons are in consequence willing to change their mind about truths according as they find they work in their *experience*, and *therefore* do not regard their actual 'truths' as 'absolute,' and so unimprovable.

In every case, then, Mr. Stebbing evinces his inability to distinguish between the psychological and the logical attitude; but clearly this should be a very slender ground for charging *us* with a confusion of logic and psychology.

(4) The charge that "pragmatism entirely fails to provide any criterion for distinguishing 'truth' from 'error'" is hardly candid. Indeed to refute it it is enough to quote *in its integrity* the very sentence on which Mr. Stebbing bases his criticism. What I said in *Arist. Soc. Proc.*, 1911, pp. 163-164) was that "we have *never* asserted or imagined that it is possible to pass from the dictum 'all truths work' to 'all that works is true,' *but have always understood both the methodological nature of postulates, and been only too painfully aware of the vogue of errors and lies*" (italics added). Moreover, I had previously distinguished (pp. 161-163) *eight* different sorts of 'truth-claim' or formal 'truth'. As 'validated' and 'axiomatic' truths are only *two* of these divisions, it is fairly obvious *why* 'all truths work' cannot be converted by a pragmatist into 'all that works is true'. "To distinguish these 'truths' from those other 'truth-claims' which satisfy some purpose but are found not to be 'true,'" is not therefore either a 'difficulty' to me, nor one I have failed either to observe or to discuss.

(5) It is not, however, impossible that Mr. Stebbing will seek to defend his bold misrepresentations of my statements by contending that they do not yield a *test* of truth *in his sense*, nor a

[1] It ought not to be necessary to add that both James and I were discussing cases where the *bona fides* of the valuer might be assumed.

"criterion for distinguishing 'truth' from 'error'" *absolutely*. If this is what he meant, I can agree with him. Pragmatism does not know of any *formal* criterion which will distinguish absolutely between truth and error, nor of any *infallible* 'test'. It discovered that 'there is no criterion of truth' *in this sense* (and no test prior to use) some time before the philosophers who now think that they can disclaim the duty of saying what they mean by 'true' and of discriminating it from 'false,' and yet avoid scepticism. *But it does not need such things*, and takes them as symptoms merely of the breakdown of intellectualism. It has abandoned the search for such impossibilities, and is content to understand 'criteria' and 'tests' in a humanly intelligible and scientifically practicable manner. And it can do this just because it does *not* take any truth or test (however adequate *pro tem.*) as absolute, and absolutely final. All its criteria of working are 'valuable,' not 'valid,' and all its testing is cumulative.

If then these terms have a different sense for Mr. Stebbing and for me, it merely becomes necessary for me to point this out, and to remind him that the task of discovering a criterion and test of truth *in his sense* has so far exceeded the powers of the acutest and profoundest minds among intellectualists. No such criterion has ever been found or devised, and the more attempts are made, the more complicated and incredible do the results become. The intellectual choice, therefore, is only between believing it a mistake to demand such an *a priori* formal test, and scepticism. And whichever of these alternatives is preferred, does it not remain a scandal that the 'theoretic' analysis of human thought should be unable to formulate a distinction which is practically in such familiar use as that between 'truth' and 'error,' and an absurdity that when a theoretic account of this distinction is demanded philosophers should naïvely proffer a formal definition of 'truth' which *includes* 'error'?

F. C. S. Schiller.

VI.—CRITICAL NOTICES.

La Reazione Idealistica Contro la Scienza. Da Antonio Aliotta. Palermo, 1912. Pp. xvi. 528.

Mr. Aliotta's work, though, as he tells us in his Preface originally designed as a prize essay on a theme propounded by the Royal Society of Naples, has a value far surpassing that of most compositions of the kind. Indeed, it is a particularly excellent contribution to the history of modern philosophical ideas, catholic and comprehensive to the last degree in the completeness with which it takes account of the philosophical and scientific movements of the last few decades in Europe and America alike. The author seems equally at home whether he is dealing with Great Britain, France, Germany, America, or his own country. He moves as freely when discussing the philosophical assumptions of physicists like Helmholtz, Kelvin and Clerk Maxwell, or chemists like Duhem as he does when he is expounding or criticising the theories of professed philosophers such as—to mention only a few of the thinkers who come in for consideration—Royce, James, Rickert, Bergson, Meinong and Bradley. His statements of the theories which he criticises strike me as singularly full and sympathetic, (I may refer for examples to the account of Royce and Münsterburg in Part I., sec. ii., c. 3), and his criticisms are usually acute and to the point, and in many cases unanswerable. His style is at once clear, simple and terse. Altogether, I know of no more successful attempt to write the history of the philosophic movements which have followed on the discrediting of the Agnosticism of Spencer and of the arrogant Positivism of the middle of of the last century, to indicate the connexions between the different movements, and to ascertain their permanent value. I only hope that the bad old tradition that a knowledge of German is sufficient equipment in the way of modern languages for a British philosopher will not prevent my fellow-students in this country from profiting by Mr. Aliotta's labours.

Before I go farther, I may be allowed to mention one or two minor defects which to some extent mar so excellent a piece of work. To begin with, though the general get-up of the book is, as with most Italian works on philosophy, highly satisfactory, the number of typographical errors which have gone undetected in the proof-reading is considerable. Most of them are actually obvious

and do not affect the author's sense, but there is a particularly annoying one on page 446, where an observation of M. Couturat with reference to a well-known argument of Kant for the view that geometry rests on a peculiar form of intuition, is made unmeaning by the substitution of the words *figure simile* for Couterat's *figures symmétriques*. A mishap of much the same kind is that on page 438, where the author speaking of Cantor's "ordinal" defin tion of the continuum, gives by an oversight a definition not of the continuum itself, but of the "series of type of order ω" which enters as an auxiliary notion into Cantor's "ordinal definition," though he speaks in the next sentence of "this definition of the continuum". Whether the slip is due to haste in writing or to the accidental omission of a few lines by the printer, it should certainly be corrected when the book reaches a second edition. A more important defect, for which I cannot account, is that the exposition of Mr. Bertrand Russell's views on the logical character of geometry is entirely based on his early *Essay on the Foundations of Geometry*, no hint being given of the grave changes of view in Mr. Russell's later work. This is all the more strange because in the very next chapter, when the author comes to discuss the identification of pure mathematics with symbolic logic, Russell's *Principles of Mathematics* is constantly appealed to. Perhaps Mr. Aliotta abstained from studying the sections of the *Principles* which deal with geometry on the natural, but mistaken, assumption that they would merely repeat what Mr. Russell had said in his earlier book.

One more point, and I have done with the unwelcome business of fault-finding. In general the author is very generous in his recognition of work done in English. This makes it a little strange to me that De Morgan should not be named on page 427 along with Boole and Schröder as one of the pioneers of the new and extended "mathematical Logic," though Schröder, with his usual modesty, refers to him on the first page of his third volume as the real founder of the "Logic of relations". Joule also, I think, had some claim to be mentioned as well as Mayer in the account of the establishment of the law of the Conservation of Energy. Among the British and American philosophers by profession it is strange to find no mention of so eminent a thinker as Dr. Ward, especially as his point of view in what Mr. Aliotta calls "gnoseology" (*i.e. Erkenntnisstheorie*), is very nearly Mr. Aliotta's own.

The general scheme of Mr. Aliotta's work is as follows. In a brief introduction he describes the net result of Spencer's doctrine of the Unknowable, and points out that such a doctrine, taken seriously as the last word of the "intellect" about the Universe creates a direct challenge to the human mind to set up a "King Stork" in preference to so useless a "King Log". The first part of the main treatise then deals with the consequent "reaction against intellectualism in the newer theories of knowledge". There are three sections; the first treats of the beginnings of the

anti-intellectualistic movement, the second of the movement as we have since seen it "at the flood," the third of the various German philosophies in which the attempt is being made to rehabilitate intellectualism in the face of criticism. The second part of the work is devoted to a criticism of the philosophical positions involved in the newest mathematical and physical theories. The method followed throughout is to indicate the intellectual ancestry of the theories dealt with, then to expound them as much as possible in the words of their authors, and finally to submit each of them to criticism from the writer's own point of view. This point of view may be described as that of a moderate intellectualism. It is fully recognised that cognition is not the only justifiable attitude of man to his world; in fact, the writer refuses to allow that "science" has so much as a primacy *inter pares*. Science, action, æsthetic contemplation are all equally justified and equally important functions of the human mind, but so long as you are making the claim to be engaged neither in the practical work of transforming the given, nor in artistic creation, but in scientific and philosophic understanding of a given world, you must play the game you have elected to play. The "cognitive function" has an autonomy of its own which it neither can nor ought to surrender, and cannot surrender without making science an impossibility. It cannot work in shackles. More particularly, the point on which the author's criticism of the various attempts to subordinate any one of the fundamental relations of the mind to the world to any other turns is the essential distinction between sense and thought, the given and the constructions by which we seek to understand it. If you neglect the given, and declare that empirical "facts" themselves are "made" by thought, you are committed to all the faults of an exclusive intellectualism; if you try, like the empiricists and the empiriocriticists, to eliminate from your philosophy everything that is not directly "given," you have left no concepts for science to work with. Thus, in the main, the position assumed is that of Kant; the "given" percept, or, as the writer prefers to say, "sensation," and the concept, which is not, as such "given" but "constructed" on a basis "suggested" by the "given" must be conjoined, or rather, must interpenetrate, if science is to be the result. There are, however, certain points on which this doctrine seems to differ from Kant, and to differ for the better. Mr. Aliotta has no place for the Kantian "forms of pure intuition". He concedes, as I understand him, to the rationalist that the "given," in the case of Arithmetic, Algebra, and their developments, does not consist of a "manifold of *sense*". In our own inner life, our thoughts, judgments, etc., form a given manifold which is all that is required for the construction of the number-series, and the consequent development of all the branches of Mathematics which repose exclusively on the concept of number and its generalisations. Hence there is, at any rate, one branch of science which is purely con-

ceptual in its *data*, as well as in its methods, and for which we need postulate only a manifold of thoughts, a view which, in fact, goes back to Locke. For Geometry, on the other hand, and for rational Mechanics, it is maintained, an immediate "given" of spatial perception is indispensable, but, if I catch the author's meaning aright, this "given" must not be taken to be apprehended from the first in a "pure" form. What is given is the space-forms and relations of actual sense-perception. But this, as primarily "given" is not the material of the geometrical sciences. They deal with "pure cases," lines which are, *e.g.* absolutely straight or absolutely circular, have absolutely no breadth, and so forth. But objects like these are never given to us as actual sense-percepts. It is from seeing, *e.g.* lines which approximate more and more to ideal straightness and comparing them that, by "passing to the limit" we form the pure *concept* of what is meant when the geometer talks of a "straight line". This, at least, is what I understand by the theory, though the actual expression "passing to the limit," as descriptive of the formation of a scientific concept, occurs only once in the book. The point, then, is, in other words, that in knowledge the mind is never purely active or purely passive. It is always active, but active about a "given" object, and for this reason there is no such thing as a creation *ex nihilo* of scientific "fact". It is admitted to be true that, as both pragmatists and ultra-intellectualists have contended, the so-called "facts of science" are largely the creation of the man of science. With different apparatus, or different units of measurement, the "facts" would appear very different. But the "fact" won and recorded by experiment is itself the result of bringing theory to bear upon a more ultimate "fact" of every-day perception, and it is *this* fact which is, in the last resort, "given," independently of our subjective interest or choice, as that which must control our scientific thinking, and determine the type of an explanatory hypothesis. The induction by which the pragmatist seeks to show that facts are actually made what they are by *our* volition are vitiated by a standing confusion between these two senses of "fact". And the same criticism applies to the neo-intellectualistic views of writers like Cohen, who make thought the absolute creator of all its own data.

In the first chapter of Part I. the author points out that the same part which the Agnosticism of Spencer played in Great Britain in provoking an anti-intellectualistic reaction was played on the Continent by Positivism in consequence of the agnostic results deduced from it in Du Bois Reymond's famous lectures on the *Limits of Science* and the *Seven World-Riddles*. In the next he has an acute study of neo-criticism and voluntarism as illustrated particularly by the philosophical position of Riehl, Wundt, Fouillée, and Renouvier. The third chapter deals with the "new positivism" which inspires the scientific theories of Mach and culminates in the unfounded claim of Avenarius to have reached a theory of the

world from which all "ideal" construction is banished. We then have a study of "English Neo-Hegelianism," which, for the author, means the work of T. H. Green and Bradley. Green is regarded as significant as the reviver of Hegelian 'panlogism,' but as making an improvement on Hegel by his definitely theistic insistence that a personal supreme consciousness is required as the thinker of the system of intelligible relations into which both he and Hegel resolve the universe. Bradley's contribution, according to Mr. Aliotta, is to have reduced neo-Hegelianism *ad absurdum* by his doctrine of the self-contradictoriness of all relations. Hence with him Hegelianism "degenerates into an intuitionist mysticism," (the "mystical" attitude of mind, by the way, is just the one to which Mr. Aliotta seems to be constitutionally unable to be fair)—and he is therefore to be reckoned among the anti-intellectualists. It would hardly be necessary to observe that this last statement does credit to the writer's judgment, if it were not that some of our pragmatists have so oddly insisted for years in calling Mr. Bradley an intellectualist, and apparently deriving their notion of what intellectualism is almost exclusively from his works. In the second section of Part I. which deals with the more recent and extreme types of anti-intellectualism, we have first an examination of the various French philosophies which have a common basis in their rejection of the concept of "scientific law," and their insistence on universal contingency (Ravaisson, Boutroux, Bergson, Le Roy, Duhem, etc.), then of "pragmatism" and "humanism" as represented by James, Dewey and Schiller and finally an exceptionally valuable and full account of the German and American "philosophies of value," and their cognates (Windelband, Rickert, Münsterberg Royce). For the systematic thoroughness of the last-named philosopher the writer has a special admiration, though he puts with great force a criticism which seems to me fatal to Royce's whole doctrine of reality as being the expression of the internal meaning of an idea, as it stands. The question is how the "unique idea" of which my life is the expression "exists in God". God is held to experience the whole incommunicable inner life of every finite individual *as* that individual itself experiences it, without any such process of "transformation and mutation" as is dwelt on in the philosophy of Bradley. This gives rise to an awkward dilemma. Since the whole world of each individual's experience is, for Royce, the "unfolding" of the "content of a unique idea," we are driven to ask whether the "uniqueness" of each life still persists in God's experience of it or not. If it does, then God is a mere double of the world of finite knowers and the problem of the One and the Many recurs again within the very notion of God by which it was to be solved. If it does not, we must hold that though God knows me completely, and knows you completely, He is not the same identical self as either of us; there will be in the universe the three selves, God, you, myself. What sense is there then in the contention that

my only ground for believing in your existence is that you and your doings are part of the "unfolding" of the unique idea which constitutes *my* self-hood. In other words, one cannot be at once a Pantheist and a Theist, as Royce appears to wish to be.

The third and last section of Part I. is concerned with the contemporary German attempts to return to extreme intellectualism by denying that there is anything in the data of science beyond what thought creates for itself. The author's attack is levelled primarily against the so-called "immanence philosophy" and the pure rationalism of Cohen, but two other lines of thought also fall to be considered in the same connexion, the "new school of Fries" as represented specially by Nelson, and the *Gegenstands theorie* of Meinong. The explanation of the apparently odd conjunction of the "new" disciples of Fries with Cohen and Natorp is primarily to be sought in the fact that both parties offend equally against the critical principle of the necessity of both datum and constructive thought for science, Cohen and Natorp by attempting to exclude the "given" from science and to deduce its "matter" transcendentally from its form, the Friesians by substituting psychology for the critical analysis of knowledge. Meinong and his followers, to whose importance the author is fully alive, find their place in this section on account of their belief in a science of the unreal, which is, of course, a science without given data. To the contention that pure mathematics is a science of this kind Mr. Aliotta replies by asking the question (p. 385): "The figures of mathematics are indeed never given intuitively in perception or representation, but, when we correct the imperfections of immediate experience by the help of these *precise* objects, and eliminate the errors derived from the fact of the threshold, do we then pass into the field of the non-existent? Do we not rather construct a more integral and comprehensive concept of reality?"

The Second Part of the work treats of the latest theories of mathematics and physics. The purely mathematical discussion is contained in two chapters which deal respectively with the now slightly antiquated problems once supposed to be raised for philosophers by the existence of non-Euclidean geometry, and with the claims of the students of "logistic" to have reduced all pure mathematics to pure logic. I have already said something about the author's own views on the logical character of mathematical science, but I may add a word or two as to the chief points he urges against the purely rationalistic treatment of the mathematical sciences. His position with regard to the value of non-Euclidean geometry does not seem to me altogether well defined. My difficulty is that he seems to hold two doctrines which appear, at least, incompatible. He urges (*a*) that there is no experimental means of establishing the truth of the Euclidean postulate of parallelism, and that consequently we must not ask whether the geometry of Euclid is or is not *truer* than that of Lobatcheffsky and Bolyai or that of Riemann.

In point of fact, any proposition of one of these systems can be transformed into an equivalent proposition of one of the others. Indeed he suggests that the whole difference is one of terminology. If you agree, he says, to call "straight" a line which Euclid calls "curved," of course you will be able to prove of your "straight line" things which it would be false to assert of Euclid's, but that is only because what you mean by "straight line" is not what Euclid meant by "straight line". The objects being different, their properties and relations will *of course* be different too. It should seem to follow that the only advantage one of the three geometries can claim is that of greater simplicity and convenience in its formulæ, and this is the view which naturally recommends itself to a mere amateur like the present reviewer. (*b*) But Mr. Aliotta also holds that Euclidean geometry is *more* complete than its rivals. The other geometries are "incomplete" because they cannot represent all conceivable figures and relations in an ideal space (p. 423). (*E.g.*, they "exclude the possibility of similar figures".) Hence the geometry of Euclid can, by a mere change of terminology, transcribe into terms of its own figures those of the other two geometries, whereas they, since they exclude the possibility of certain figures by an initial restriction, give us only a "fragment of geometrical space of three dimensions". More precisely the point of the criticism is that an Euclidean rectilinear figure, *e.g.* a plane triangle represents at once the limit to which the series of the "triangles" of "spherical" and of "pseudo-spherical" spaces approximate continuously as the "curvature" of their sides diminishes. The principle of rationality itself therefore demands that, in constructing our "ideal" space on the basis of suggestions derived from sense-perception, we should not stop short until we have "passed to the limit," and the Euclidean system thus possesses a prerogative over the other two. "The empirical data fall into regular series, thus indicating, so to say, the direction in which we should proceed, but thought, once started on the road, arrives at the ideal limit by a law inherent in its very nature" (p. 424). The logical significance of the criticism is that, when once it is clearly understood that the Euclidean postulates define the "ideal limit," the propositions of Euclid no longer require to be stated hypothetically as mere implications of premisses which are themselves neither affirmed nor denied, but may be asserted categorically as valid for the "ideal space" of geometry. Again the reasoning of the author seems valid enough, but what I do not understand is that in asserting this conclusion he should expressly speak of the possibility of translating the non-Euclidean geometries into Euclidean terms and *vice versa*, seeing that one of the premisses of his argument was precisely that there are Euclidean propositions which cannot be "translated".

In the chapter which deals with the modern conception of pure mathematics as a body of purely logical conclusions from initial

principles involving no indefinables nor indemonstrables beyond those of logic itself, the main point to be established is that both the conception of number and the initial concepts of geometry involve elements which are extra-logical. To establish this point the author attempts to show that the professed definitions of the natural numbers, and of numerical order in terms of purely logical constants involve a vicious circle. I cannot altogether follow his reasoning on this point. Thus it is admitted that in the proposed definition of 1, *viz.*, that "1 is the class of classes u, which are not the null-class, and are such that if x is a u and y is a u, x is identical with y," we have the notions of "class," "member of a class" "null-class," but, it is argued, the idea of number is already concealed in the notions of "class," "class with no members" (p. 450). I am myself unable to follow the argument. When I assert that Socrates is wise or human, I am certainly implying a relation between a class and a member of it, but, so far as I can see, no notion of number or of *a* number is anywhere implied in my statement. Similarly it seems to me that when I simply say "such a thing as a round square does not exist" I am not answering the question "how many round squares are there?" and that, consequently, I can think of the class with no members without already possessing the notion of a *number* 0.

Similarly with the notion of order Mr. Aliotta writes, "order is defined by Russell and Couturat as an asymmetrical relation, and this, in its turn, as a relation which cannot be inverted to a relation such that the two relations $x\mathrm{R}y$ and $y\mathrm{R}x$ are normally exclusive. But can one define the inverse of a relation without re-supposing the concept of order?" (p. 451). I should have thought it obvious that one can. Surely one can think "x has the relation R to y, and y the relation $\breve{\mathrm{R}}$ to x; R is a relation which cannot subsist between terms related by $\breve{\mathrm{R}}$, and $\breve{\mathrm{R}}$ a relation which cannot subsist between terms related by R" without having previously thought of serial order at all. The assertion $x\mathrm{R}y$ does not imply the notion of order, nor yet does that of $y\breve{\mathrm{R}}x$, nor do I see that it is implied in the impossibility of the compound relation $\mathrm{R}\breve{\mathrm{R}}$. Each constituent of the definition seems to be capable of being understood without any appeal to the notion of "order" and all the constituents, and no others, are required to constitute order; hence the definition appears to me a good one. Mr. Aliotta seems to hold that the notion of order comes in in the very thought of the converse of a relation, but this I am unable to see. Surely I can think the two propositions, "Brutus killed Cæsar," "Cæsar was killed by Brutus" in entire ignorance of what is meant by "order".

A better case, in my opinion, is made out against the reduction of geometry to "logistic". The nerve of the argument is that the formulæ of "logistic" are ambiguous, and capable of interpretations which are not geometrical as well as of geometrical interpretations. Thus, to give an example of my own, there is nothing about the

equation $xy = a$, considered in itself, to show that it can be interpreted geometrically as the Cartesian equation of an equilateral hyperbola referred to its asymptotes as axes. It is only because I have already been prompted by suggestions contained in certain sense-data to form the concept of "ideal" spatial figures that I see that this interpretation is possible, and further, in the case of formulæ which admit of no known interpretation except a geometrical one, it is only our previous possession of geometrical notions which assure us that they have any meaning at all. Apart from this previous geometrical knowledge we have no assurance, therefore, that many of the classes of entities considered by "logistic" have logical existence. On the other hand, this same previous knowledge assures us that the classes with which we are dealing have logical existence, and therefore enables us to assert geometrical truths not merely as the implications of initial hypotheses, as to the truth of which we affirm nothing, but categorically. The criticism appears to me weighty and sound, though I readily admit the uncertainty of the judgment of any one but a trained mathematician on so difficult a point.

The next two chapters are devoted to an examination of two important attempts to banish the fundamental ideas of mechanics from the physical sciences, the "energetics" of Ostwald, and the "qualitative physics" of Duhem. With Ostwald's *Natur philosophie* a trained philosophical critic has naturally little difficulty. Mr. Aliotta easily shows that Ostwald's programme begins in pure phenomenalism, though phenomalism of a singularly absurd kind which assumes that in sensation we have a direct awareness of energy (as though, for example, it were energy and not colour and sound which our eyes and ears directly reveal to us), and then ends in an extravagant doctrine of energy as a "thing in itself," even thought being conceived as a "phenomenal" manifestation of this ubiquitous metaphysical reality. It is also urged with much force that the very mechanical concepts which "energetics" proposes to get rid of (motion and the like) are logical presuppositions of the concept of energy itself. Duhem comes off rather better, since he at least admits real and irreducible qualitative differences in nature, but, it is contended, he has given no valid reasons for his attempt to sever physics from its basis in rational mechanics. To say, as he does, that the work of the physicist is merely to express the experimentally found uniformities of nature in the most economical fashion, not to explain nature, is a fallacy of ambiguity. The physicist does not explain nature in the sense of reaching an Absolute or thing-in-itself beyond the confines of experience, but he does explain it in the sense that "physical theory with its logical apparatus puts nature before us in an intelligible form," and it is precisely by his appeal to rational mechanics that the physicist succeeds in this task. "The mistake of Ostwald and Duhem is to be found in their belief that motion can be put on a level with the other

qualities revealed by immediate experience, *e.g.* with a variation in heat, but it is easy to see that they thus confuse pure motion, which is an ideal construction of the same order as space and time, with the qualitative data which constitute the starting-point of this formation of a concept" (p. 502). Motion, in the sense put on the word in rational mechanics, cannot be dispensed with by any theory of physics, and the advocates of the "new" physics do not dispense with it in their own theories. Hence the concepts of the classical rational mechanics, though far from exhausting the content of sensible experience, will always be the necessary foundation of physics. "In every phenomenon of nature there is always something mechanical, but not all is mechanical, and hence it will always be necessary, in every branch of physics, to integrate with other explanatory concepts the universal principles of mechanics since it is they alone which present us with the universal form of physical reality which can be reconstructed *a priori*, the necessary warp for all who will to weave an intelligible world" (p. 506). In the last chapter we have a brief but brilliant examination of the tendency, so common among British men of science, to regard the construction of a working model as the supreme type of scientific explanation. Mr. Aliotta rightly refuses to accept the claims put forward for the working model by Lord Kelvin, Clerk Maxwell, Lodge and others. As he says, Kelvin offers us a whole series of models, each incompatible with the others, to illustrate one and the same law. Other physicists moreover declare themselves able to carry on their investigations better without any appeal to such visible and tangible models. And when the model is constructed, it is not the structure itself, but the meaning which the physicist who made it reads into it which is the "scientific explanation". One of Kelvin's models would suggest no explanation of anything to any one entirely devoid of the concepts it was devised by Kelvin to illustrate. Thus the predilection of British physicists for such models merely proves the unusual frequency in our country of persons who cannot think without the help of visual percepts or images. Such persons commit a natural but obvious fallacy when they confuse the imagery which sustains conceptual processes with the processes themselves, as was done *e.g.* by Kelvin when he declared himself unable to conceive the electro-magnetic theory of light because he could not imagine a working model of it. Such an inability only exists for the type of thinker who cannot work without concrete imagery; for one whose thought is, in the main, imageless the difficulty is non-existent.

The conclusion of the whole discussion then is this: "Scientific experience is not the only experience which can and ought to provide a basis for philosophical speculation. . . . Art and the life of morality are not a web of illusions, but spheres of conscious reality, . . . and philosophy must take these data also into account, if she would give us a complete concept of the world. The

contemporary lines of speculation which have emerged from the opposition to intellectualism have the merit of asserting the rights of feeling and will against the excesses of scientific materialism and the cold indifference of positivism. But . . . they have ended by falling into the opposite extreme of sacrificing the understanding to mystical illuminations, free flights of fancy, or to a narrow practical utilitarianism. To restore the fullness of conscious personality, to recognise a proper and autonomous worth in each of the three fundamental functions of the spirit by seeking their concrete synthesis in the unity of the human subject and not in any alleged domination of one function over the rest,—this is the one effectual method towards composing the secular strife among our spiritual activities" (p. 526). This task, of course, far exceeds in scope that which the author has set himself to execute in his volume, which, as he is careful to remind us, is intended to deal with the reaction against intellectualism solely from the standpoint of the "theory of knowledge".

A. E. Taylor.

Kant's Critique of Æsthetic Judgment. By James Creed Meredith, M.A. (N.U.I.), Sen. Mod. (T.C.D.) Oxford: At the Clarendon Press, 1911. Pp. clxx, 333.

As is indicated by the subtitle, this work is a translation of the *Critique of Æsthetic Judgment*, accompanied by seven introductory essays, notes and analytical index. The headings of the essays are: I. Problem of the Critique of Judgment; II. Last Stages of the Development of Kant's Critique of Taste; III. The Beautiful; IV. The Sublime; V. Interest in Beauty; VI. Art and the Artist; VII. The Dialectic. Mr. Meredith himself draws attention to the fact that these essays 'are not introductory in the usual sense of the word'. Beginners will not find them an introduction to the critical philosophy, for they presuppose previous acquaintance with that system and especially with the Critique of Judgment. They form, as it were, an exegetical treatise, which demands constant reference to the text. They are in no way intended to take the place of a study of the Critique itself, but are mainly directed to solving difficulties which must necessarily arise for every earnest student of the original. In this way Mr. Meredith has succeeded in throwing light on many of the finer shades of Kantian thought, and in proving that despite the abrupt transitions, apparent irrelevancies and obvious want of connexion, the æsthetic doctrine of Kant is really an organic whole. Thus singularly few passages of any importance have escaped his searching analysis.

There can be no doubt of the ability with which he has performed the task which he has set himself. In Kantian exegesis agreement

is hardly to be expected; but though the reader may not be able to accept all Mr. Meredith's conclusions, he will invariably find the exposition stimulating. Though possibly a Hegelian at heart—hints pointing in that direction are not altogether wanting—he is not in the least hurry to make the 'transition'. In method, in doctrine, and in spirit the third Critique occupies the same critical standpoint as the other two. From 1781 onwards, Kant never looked backwards either to Dogmatism or to Empiricism—the one important change which his views underwent was the recognition, which came upon him very gradually, that it was possible to discover *a priori* principles in connexion with the faculty of feeling. He may have sighed for, and even personally believed in, the "higher synthesis" and the "intellectual intuition," but he always steadfastly refused to look upon these as anything more than regulative ideas, holding that his evidence never warranted him in making the required leap. The fact that Mr. Meredith is quite clear on the point that the three Critiques are all of one piece gives the work its great importance for English readers. It is the first detailed study in English of the *Critique of Æsthetic Judgment* for its own sake.

But the development of Kant's thought was, as usual, very slow. This is made abundantly clear in the second essay, where a close examination of the letter to Reinhold of December 28, 1787, shows that most of the *material* was ready by that date. Matters were different, however, so far as the *form of exposition* was concerned. In this connexion an interesting conjecture is put forward "which is opposed to current assumptions. Kant is thought to have written the *Critique of Judgment* from the first section to the last in a continuous, straightforward, and regular manner." From this view Mr. Meredith dissents. His conclusions are briefly these. The present form of the *Analytic of the Beautiful*, with its analysis of the judgment of taste into the well-known four moments, is an afterthought, which only occurred to Kant after he had written § 59, where he deals with Beauty as the Symbol of Morality. Although disinterestedness, universality and necessity were recognised from the first, they were not expounded in the formal manner which they subsequently received, and finality apart from end was originally *the* principle of the judgment of taste. Hence §§ 2-8 and §§ 18-22 are to be looked upon as an interpolation added to the original draft, with the result that the *Deduction of Pure Æsthetic Judgments* (§§ 30-38) appears full of repetitions. "The suggestion that the division of the Analytic into four moments corresponding to the four kinds of categories was an afterthought is by no means one that recommends itself at the first view." But all the material of the suspected paragraphs makes its appear ance again, and as if for the first time, in §§ 30-38; except in one passage which is itself open to grave doubts, no further reference is made to the fourfold division, even where such a reference was

to be expected. Mr. Meredith has no hesitation in holding that the cumulative effect of these and similar arguments is to prove his thesis.

It seems to us that, if anything, he has understated his case. Kant was most unfortunate in attempting to connect the four moments of the judgment of taste with the table of categories. *Grammatically* the judgment of taste is built on the same lines as the logical or cognitional judgment—in both we have a subject and predicate connected by a copula—but actually the two kinds are *toto cælo* distinct. In the cognitional judgment the subject and predicate are bound together by means of one of the categories; but in the case of the æsthetic judgment there is no such connexion —in fact there is no categorised predication about the subject at all. To compare, for instance, the moment of quantity of the æsthetic judgment with the category of quantity, or even with the universal judgment of Formal Logic is obviously absurd. The four moments were intended, as Mr. Meredith points out (li. *seq.* and note to p. 45), "to formulate the conception of a pure æsthetic judgment as one completely distinct and *sui generis*". They thus give expression to its 'two peculiarities'; "that it has universal validity *a priori*, yet without having a logical universality according to concepts, and secondly that it has a necessity, . . . but one which depends on no proofs" (§ 31). They also mark it off clearly from the cognitive, ethical and hedonic judgments.

Mr. Meredith is correct in saying that the *Analytic of the Sublime* follows a radically different plan from that of the Beautiful. But I cannot agree with the statement that the "treatment of the Sublime is predominantly psychological in character". As a matter of fact a much closer adherence to the table of categories is to be found here. The Sublime is divided after the analogy of the well-known division of the categories into the Mathematical and the Dynamical. In the *Critique of Pure Reason* the nerve of this distinction is to be found in the fact that the former, as extensive and intensive quantity, have to do with the Synthesis of the homogeneous, the latter with that of the hetrogeneous manifold and the relation of objects to each other and to the mind. The analogy becomes still more striking on a consideration of the antinomies connected with each class. The ideas connected with the mathematical categories are those which are operative in the case of the mathematically sublime; and the same holds true *mutatis mutandis* for the dynamically sublime. Again the whole treatment of the mathematically sublime follows the 'moments' of the category of Quantity; Unity (the measure), Plurality (the amount) and Totality (the whole) (*Prolegomena*, § 21). We have here, therefore, an entirely different treatment from that of the 'four moments' in the case of the Beautiful. This, no doubt, is in favour of Mr. Meredith's contention that the latter was an interpolation. Yet the implied censure on Kant (p. lxxxix), that

Quantity, Quality, Relation and Modality do not in his treatment apply to each kind of judgment on the Sublime, is scarcely just. It was natural, though perhaps not necessary, that Kant should limit the categories Quantity and Quality to the case of the mathematically sublime, and make no reference to them for the dynamically sublime, but I think that it is clear that the *four moments* of the æsthetic judgment, disinterestedness, universality, finality apart from end, and necessity, are all applicable to each kind of judgment on the sublime.

It is, however, in his attempt to unravel the train of thought which is really operative in the *Critique of the Æsthetic Judgment* that Mr. Meredith makes his most important contribution to the interpretation of Kant. Kant, according to him, is a most dramatic and artistic writer, who never gives out more of the truth on any particular occasion than that occasion demands. Hence it is only at the very end of his exposition that we grasp what he is really aiming at. Now the real sequence of thought in the *Critique of Æsthetic Judgment* is not that which might at first sight appear, but something like the following. Kant arrived at "his distinction between the pure judgments upon the Beautiful and the Sublime by his usual process of abstraction and refinement of analysis. First contemplating the concrete unity of the beautiful work of art, in which all factors or elements are presupposed, he seems to arrive at the distinction between judging and producing. . . . Relatively to the judgment of taste the object estimated is always a *given* form. . . . Hence in the Analytic of Taste, Kant not alone abstracts from all content so far as it is the product of art, but he selects as the typical cases of beautiful forms those that relatively to art are *given* or immediate. . . . On the other side the simplest case of production is where the object is formless, and where, therefore, no finality is supposed on its part; and where, on the other hand, finality is developed in a mere act of judgment." Both of these elementary factors are then analysed after which "Kant proceeds to a Deduction of the judgment of taste and does so as a preliminary to the consideration of those concrete cases of beautiful objects which are complicated by the factor of a finality of the subject, answering to the concept of freedom, but which are only thus complicated by combination with what requires no Deduction in respect of its function" (lxxiii). "The judgments upon the beautiful and sublime, abstractly considered, are the respective points of departure for two lines of critical investigation dealing with the component factors of . . . a product composed with soul and taste" (lxxxv). Thus "beauty may be considered quite formally, as the object of the mere critical judgment, and thus as opposed to the sublime; or it may be considered in the concrete as the expression of æsthetic ideas, in which case the factor that first made its appearance in the judgment upon the sublime is allowed its full importance". According to Mr. Mere-

dith, then, the sections on art, instead of being an afterthought, as some critics suggest, would seem to be the kernel of the whole work. It is therefore only fitting that it is in the treatment of Genius and Art that Kant 'at last shows his hand' (note to p. 183) by defining "Beauty (whether of Nature or of Art) as the expression of æsthetic ideas". Thus even in the case of nature if we examine the content of the object we must recognise the interest of Reason. It is Reason in fact 'that gives imagination that freedom in which it harmonises with the understanding' (lxxxvi). Beauty cannot in fact be found in mere nature, 'but only in nature regarded after the analogy of art, so that it becomes the mouthpiece of spirit and speaks to us frequently in its beautiful forms' (cv). There is in fact a necessary advance in thought from the first moment of disinterestedness to the *sensus communis*, from this to the consideration of the empirical and intellectual interest in the beautiful, from this latter, since what Kant disparages is not art but the intellectual interest, to art, until finally we come to Beauty as the symbol of morality.

The view thus put forward is supported with a wealth of argument, which can only be hinted at here. "The interpretation may seem far-fetched but it has the merit of introducing clearness into Kant's account as a whole." It is first introduced to provide a satisfactory basis for the division of the Analytic into the Analytic of the Beautiful and the Analytic of the Sublime. Mr. Meredith rejects that put forward by Kant in the Introduction, section vii., on the ground that 'susceptibility to pleasure arising from reflexion on the forms of things (whether of nature or of art)' can only refer to the Beautiful, and cannot therefore form the required *fundamentum divisionis*. Again the view put forward is necessary to explain the position of Art in the Critique, unless we assume that the consideration of art was introduced capriciously "hot-foot upon a section which completely depreciates its significance". But this cannot be the case for it is only in the sections which deal with art that the difficulties left outstanding from the Deduction of the Æsthetic Judgments are finally solved.

Now, whatever conclusion may be come to in reference to the correctness or incorrectness of this exposition, there can be no doubt that the thorough examination to which every important passage bearing on the point is subjected can only help to a deeper and more thorough understanding of Kant. But notwithstanding the severe strictures which in this volume are passed on the 'Hegelising' interpreters of Kant, the development of thought here suggested reminds me of nothing more than of the grand march from Being to the Absolute. As Mr Meredith says, the difficulties of understanding the *Critique of the Æsthetic Judgment* "arise from the fact that so many different points of view have been opened to us that we feel at a loss where to throw the chief emphasis". Now, notwithstanding the subtle ability and intimate knowledge of

the subject-matter which Mr. Meredith brings to bear on this question, I cannot help thinking that he has thrown the emphasis on the wrong place. In justice to him, however, I again desire to call attention to the fact that within the limits of a review I have been able to give only the baldest outline of his train of reasoning. Personally I have never been able to appreciate or notice that dramatic character of Kant's writing to which he calls attention. To me it has always seemed that one of the chief causes of the misinterpretation of Kant is due to his incurable tendency to anticipate. In this he presents a striking contrast to Hegel. Thus in the *Critique of Pure Reason* one of the principal causes of the misunderstanding of the Transcendental Æsthetic has been Kant's impatience to deal with mathematics and to introduce the distinction between phenomenon and noumenon. Furthermore, Kant undoubtedly got his bent to the *Critique of Judgment* from the æsthetic side, but it does not seem to me that Mr. Meredith has done justice to the extremely formalistic and architectonic character of his thought. The *Critique of Judgment* is the triumph not of genius (in Kant's sense) but of logical and systematic thinking. The astounding fact is that the man who cites "Die Sonne quoll hervor, wie Ruh aus Tugend quillt" or even the passage from the Great King—in this latter case we certainly have no pure æsthetic judgment!—as examples of poetic perfection, and who yet can have had personal experience of no other kind of fine art except poetry and literature, should occupy the position in æsthetic literature which Kant does. But the main question he attempted to answer was not what is Genius, or what is Art, but how are synthetic judgments *a priori* possible for the faculty of feeling. To answer this question, Kant applies exactly the same method as in the *Critique of Pure Reason.* There the procedure, *e.g.*, was to show that Mathematics or Natural Science rested on presuppositions which could be otherwise proved, *viz.*, by reference to the possibility of experience. Similarly here, when Kant requires the *sensus communis* he does not attempt to prove its existence psychologically or by an appeal to experience. The claim to universal validity put forward by our judgments of taste presupposes a *sensus communis.* Have we any other reason for assuming such a sense except that it is necessary to substantiate this claim? Yes, it is involved in the communicability of our everyday experience. Once this is shown, as it is in § 21, the main problem which Kant set out to solve is satisfactorily disposed of. True, all that Kant has established is a *normative necessity* for the agreement of all, but that was all Kant ever undertook to prove in any of his Critiques. The question as to how far this necessity is actual, or how far men really exercise this faculty is not one for the critical philosophy. The problems which Kant raises in § 22 have to do with this latter question, and it is only natural 'that Kant nowhere definitely answers' them (lxvii).

But though art does not occupy the central position in the *Critique of Æsthetic Judgment* that Mr. Meredith assigns to it, yet he is quite justified in refusing to consider it a mere afterthought. In his efforts to set up a norm of the pure æsthetic judgment, Kant has left singularly few objects to which it can apply. Yet for most of us it is art and not ornamentations *à la grecque* that arouse our interest. If Kant could only prove beauty for the few objects left to the pure æsthetic judgment, he would have done very little to solve the æsthetic as distinct from the critical problem. If, then, Kant's account of Beauty, as finality apart from end, is correct, how can the product of human purposive activity be regarded as beautiful? It is in order to solve this question that the doctrine of Genius is introduced.

Many other problems of deep interest to the student of Kant are discussed in these 'introductory' essays. Apart from these exegetical questions there are some excellent expositions of Kant's views. The account of the Genius, his restrained originality and his relation to his time, seems particularly good. In fact the opening essay, which deals with the point of view of the Critical Judgment, is the only one that can be considered as in any way disappointing.

The notes also contain some excellent suggestions regarding the critical philosophy, as for instance where the hypothesis is put forward that the framer of a concrete ethical system must possess something of the character of the artistic genius, or where an earnest plea is made for the 'critical' as distinguished from the psychological consideration of the laughable. But the bulk of them is given over to quotations from Kant's British predecessors. From these it appears that the *details* of Kant's treatment were nearly all anticipated. But this does not detract from Kant's greatness, "for the supreme merit of his æsthetics lies in the fruitfulness of his point of view, the comprehensive survey which it enabled him to take of his subject, and the systematic connexion of his account as a whole. . . . No single writer was able to say a fraction of what Kant said, for they lacked a comprehensive point of view from which to co-ordinate the different aspects of the subject and bring them to a common focus" (xxii). This once acknowledged, the question of how much or how little is to be included in the notes becomes mainly a matter of taste. But they at least serve Mr. Meredith's purpose of showing that there is a psychological as well as a critical side to the question. The translation seems very carefully done; it is always smooth, and sometimes, no easy matter when dealing with Kant, even elegant.

J. M. O'Sullivan.

A Philosophy of Social Progress. By E. J. URWICK, M.A. (Oxon.), Director of the School of Sociology, London; Tooke Professor of Economic Science, King's College, etc. London: Methuen & Co. Pp. xii, 297.

THIS is a work of considerable interest and value. It may be doubted whether there is any book from which a clearer view can be obtained of the general nature of a philosophy of society, as distinguished from descriptive and empirical sociology. The author's general conception of this distinction is indicated in the following statement (pp. 6, 7). Science 'is concerned with causal processes; traces these wherever discoverable, and states them as laws for us to use as best we can. But philosophy deals with the *significance* of the processes and their results in relation to an ideal scheme of life. Any set of our activities may be treated scientifically, with greater or less addition to the sum of useful knowledge; but no set of our activities can be *interpreted* by science if it forms part of our struggle towards an ideal which gives their significant quality to the activities. Social philosophy attempts this interpretation; and for this reason we separate it very distinctly from science, and ally it with religion; for it involves a strong conception of a master aim and master plan of our life; a fervid idealism is the core of it; its essence is to lay hold of a dream of a City of God; and to make all its reasonings, all its linkings of effect to cause, all its groupings of change under the laws of sequence or causation, dependent from beginning to end upon the spirit and purpose of the dominating ideal.' Again he says (p. 23): 'Scientific knowledge is decisive and authoritative in regard to action when the end in view is definitely known and capable of clear definition. For the man who wants to build a bridge or cure a squint the science of the mechanician or of the doctor is rightly dictatorial. But for the individual who wants to improve his lot, or for the society which wants to reach a better social state, there is no such science. In social life there are no definite, limited, clearly definable ends, for all ends or aims, even those which seem most obvious and certain, are relative to the indefinable and ever-changing general ideals by which we are animated, and derive their qualities and their significance from these.' 'What then?' he inquires further (p. 36); 'Can a social philosophy perform the impossible for us, though science must fail? By no means; but what it *can* do is just this: it can take the *socius* or citizen, and explain what is involved in his membership of the whole social group or any part of it, in his relations to other members, in his connexion with each of the institutions which help to give meaning to his actions.' 'A social philosophy cannot tell us what to do, but it can tell us very clearly where social duty lies, and how attached to social facts; it can never tell us how to be happy or well-off—cannot, indeed, define the content of the end to which we give the name of happiness or well-being; but it can

render explicit the general conditions upon which any valid ideal must rest.'

After giving these general explanations, however, Prof. Urwick, instead of proceeding forthwith to discuss 'the general conditions upon which any valid ideal must rest,' turns aside rather to give an account of the various points of view from which social life may be regarded. In chapter ii. society is considered as 'subject to the forces and laws of the physical world'; in chapter iii. as 'subject to the forces and laws of organic life'; in chapters iv. and v. as 'subject to the laws of mind'; and it is only when we reach chapter vi. that it is 'considered as an ethical structure: a unity dependent upon purpose'. This method of treatment reminds one of Herbert Spencer's physical, biological and psychological introduction to the problems of ethics; but whereas Spencer was seeking to show how much light the ethical student may derive from these other subjects, it is rather Prof. Urwick's object to bring out their inadequacy as interpreters and guides. All that he says in this connexion is interesting and carefully worked out, with well-chosen and sometimes illuminating illustrations; but we do not really reach the more positive conceptions that the writer has in his mind until (in chapter viii.) he deals with 'the spiritual element in social progress, and the nature of the true individual'. The views set forth in this chapter are further emphasised and applied in other two chapters; and it is these three closing chapters of the book that must be regarded as containing the gist of its teaching.

Unfortunately, the eighth chapter is the least satisfactory in the book. A social philosophy must, it would seem, be, first of all, a philosophy. It must rest on some definite view of the universe and of man's place in it. Now, it is not easy to discover any such foundation in this book. The contention of the eighth chapter is that we have to distinguish in man's nature between the 'self' and the 'soul,' and that the latter term expresses the more fundamental aspect in his life. The 'soul' is described as being 'the true individual' which 'lies behind the self or the person, and is far more real than it'. 'He is not,' we are further told, 'in any sense a natural or social product. He does not owe his origin or original equipment to nature; he does not owe the elaboration of his equipment to society or the social process. He must, therefore, be regarded as both supra-natural and supra-social; he is the individual as a *datum*, not of this life or world at all.' 'The true individual is a soul and not a self,' 'he aspires but does not desire,' 'he is a God-seeker but not a self-seeker'.

This conception of a 'true individual' is so fundamental that one naturally looks for a definite exposition of the grounds upon which it is maintained or at least for some reference to philosophical works in which the grounds for it are to be discovered. It is very disappointing, therefore, to find that the only definite reference is to one of Browning's poems—'A Death in the Desert'—in which

reference is made to the 'three souls which make up one soul'. There is also a vaguer reference to the conception of 'Nirvâna'. Beyond this one seems to be left to conjecture how the conception of the 'true individual' is reached, and what is its exact significance. Judging by the way in which the conception is applied by Prof. Urwick, I should suppose that it has a good deal in common with the 'eternal consciousness' of T. H. Green; but evidently it has also many points of difference. Green would not recognise the distinction between a 'soul' and a 'self'; and he would regard the true individual as being essentially social. We can only hope that at some future time Prof. Urwick will explain his conception of individuality more fully, and give an account of the philosophical basis on which it rests.

In the meantime, however, the use that is made of this fundamental conception is interesting. Prof. Urwick's contention is that it supplies us with 'a criterion or test of the *worth* of any social aim or policy'. 'No aim is true which is not really spiritual—that is, which is not consciously directed to bringing nearer the attainment of the only absolutely good end, the realisation of the true individual as supreme over both society and self' (pp. 246-247). It is admitted that this is a test which it is not altogether easy to apply. 'The findings of philosophy, like the deepest teachings of religion, are the hardest things in the world to apply in detail, though their general application is so clear' (p. 259). The general application, it would seem, is that anything which diminishes the content of duty is bad; but in particular cases it is not easy to determine whether the content is or is not diminished. This is illustrated by reference to such problems as the feeding of school children, the relaxation of the stringency of the marriage contract, etc. 'The question which matters is not "What particular responsibilities shall be insisted upon?" but "How far is the consciousness of duty increased?"' (pp. 265-266). Here again we are reminded of the doctrine of Green, that 'the only good is goodness'. 'The object of all improvement is, not to give our neighbours or ourselves an easier time or a more comfortable life, but to give ourselves and them a better opportunity to develop all our personalities along the lines which lead towards the realisation of our true individualities' (p. 291). What these are, cannot be definitely ascertained: 'Progress comes from visions and the faith in them, not from any elaborate charts of social causation' (p. 287). But the uncertainty does not greatly matter; for 'what is of importance is not the reform, but the will that prompts it'. 'In the spiritual scale of values it is not the success of the treatment applied by the good Samaritan which counts for much—any more than it is the actual purchasing power of the two mites given by a poor widow; but simply the fact that the one did his best in the spirit of neighbourliness, and the other gave her all in the spirit of sacrifice' (pp. 296-297).

The objection that naturally occurs here is this. If it is simply the spirit of *sacrifice* that counts, why should not the widow cast her mites into the sea? If, on the other hand, it is the spirit of *neighbourliness* that counts, it would seem that the true individual is not unsocial. Such an objection, it seems to me, could only be met by a more thorough consideration of the nature of the true individual and his relation to the social unity. In the absence of such a consideration, Prof. Urwick's book can only be described as suggestive; but this commendation it certainly does deserve. It emphasises an aspect of human life which sociologists in general are too prone to overlook—the fact, namely, that man is not only a 'social animal,' but also a moral and religious one. But Prof. Urwick appears to oppose these aspects of man's nature to one another, rather than to reconcile them, or to bring out their essential relations. Many readers of Aristotle have felt that his account of the theoretical life is too much cut off from his treatment of the life of the citizen. There seems to be a somewhat similar defect in Prof. Urwick's conception of the true individual. But the defect is one that may yet be remedied without any sacrifice of what is valuable in his work—of which there is a great deal.

J. S. Mackenzie.

The Problems of Philosophy. By Bertrand Russell, M.A., F.R.S., Lecturer and late Fellow of Trinity College, Cambridge. The Home University Library, Williams & Norgate. Pp. viii, 250.

A great deal may be said in 250 small pages by a man who knows what he wants to say. And this little book is a work of great interest and importance. Critics of Mr. Russell may regret—I sympathise with the feeling—that views which they hold to be fallacious should be so admirably and authoritatively presented to popular readers. But we may note that the books which Mr. Russell recommends for further study are first-rate philosophical classics, and the list, judiciously brief, shows no one-sidedness. And for the rest, the only remedy is that Mr. Russell's critics should write books as good as his, if they can. After all, Wallace and Caird have had their chance with the general reader, and Mr. Russell has a right to his.

Mr. Russell explains in the Preface that he has not dealt equally with the whole field of philosophy, but has treated rather of the Theory of Knowledge, where a positive contribution seemed more readily made, than of Metaphysic, where results (so I understand him) might be more negative. Still the book presents a completer survey of his views, though of course less detailed in its departments, than he has published before. It is admirably clear both

in statement and in arrangement, and charged at every point with novel and interesting matter. My attitude to it, unluckily, must be hostile on the whole. But my hostility assumes a peculiar form. For I believe that the author's fundamental demands are just, and that his error lies in holding that they can be satisfied within the framework of his own logical conceptions, and cannot be satisfied within that which others have adopted.

I will first briefly survey the elements of the world as presented in Mr. Russell's work, and then say something of the theory of knowledge involved in the representation.

First come the data of sense; not acts of sensation, and not mental states, but what is given in and through acts of sensation.

These, however, cannot *be* the objects of the external world. And this incapacity of theirs infects also what one would call in current language the perceived object, such as a wooden table. The relation of perceptive judgment to sense data is discussed quite late in the book. I do not think the first three chapters recognise a distinction between the sense-data and what one calls the wooden table. In any case, the doctrine is, that neither the sense-data nor the wooden table (whether simply one with them or not) constitute the real external table.

This, known by inference from the sense-data as their cause, is a physical object, that is to say, something in space and capable of motion, but endowed with no sense-data of its own; *i.e.* I presume intrinsically and as unconditioned. For as conditioned it surely owns the original sense-data from which it is inferred. Physical objects are public and neutral, and are in physical space, which is also public and neutral; while sense-data are private and in private spaces, some of which also differ in kind (visual, tactual, etc.). The spatiality and motion of physical objects are therefore not such as we are acquainted with, but only possess relations corresponding to those we perceive. In physical space objects have only their true shapes, not the varied appearances which these shapes present to our sense-perception. (In spite of the author's strongly held principle that objects of mind need not be mental states, with which I am quite at one, I am not sure that his conviction of the privacy of sense-data and sensuous space does not rest ultimately on the notion that they are mental states. A bodily change, *e.g.*, in my eye, is not in principle private to me. Why is light so? See the treatment of light, pp. 45 and 65.)

Physical objects, then, cannot be directly known. "The actual thing which is the table is not strictly speaking known to us at all" (75).

Other people's minds, like physical objects, are not known to us directly. They can be known only by introspection, and therefore each only by its owner. Thus, *e.g.*, Bismarck alone can make the judgment of which he himself is a constituent, for to us the actual Bismarck is unknown. "When we make a statement about Julius

Cæsar, it is plain that Julius Cæsar himself is not before our minds". We are however justified in making judgments of this type, as "knowledge by description," to which I will recur.

We also know past sense-data, inner or outer, directly by memory.

There are moreover universals, defined as anything which may be shared by many particulars. They *are*, but in a world which is neither mental nor physical. Relations, doubted or neglected by philosophers—surely not by Green, who talks of hardly anything else [1]—are a principal class of these.

Whatever is given in sensation or is of the same nature as what is given in sensation, is particular. Proper names stand for particulars; other substantives with the remaining parts of speech, for universals.

Through universals we have *a priori* knowledge, mathematical, logical, and ethical. All *a priori* knowledge deals exclusively with the relations of universals, and depends on the fact, discovered by reflexion, that sometimes we can see these relations as self-evident. Truths which merely state what is given in sense are also self-evident. The truths immediately known or self-evident make up our intuitive knowledge of truths, which is the source of all our other knowledge of truths. The basis of Induction is such a self-evident truth; and the theory of Induction leads from the knowledge of things to the discussion of general truths, which in one form or another occupies more than the last half of the book. But "knowledge concerning the universe as a whole is not to be obtained by metaphysics" (221). Taken quite literally, this statement seems to me precisely wrong. Truths about the universe as a whole are just, I should have thought, what philosophy can establish. Particular facts beyond scientific experience, such as a future life, or the existence of a personal God, I strongly agree with the author that it cannot establish. And I believe that post-Kantian idealists would mostly take this view. I do not mean that light is not thrown on many particular problems by our general conception of the universe.

Even from this slight outline of the system before us, is it not obvious that we have here a very strange realism, in net result closely following Locke's doctrine? Thus there is the real physical object, Locke's real essence, spatial and capable of motion, but not known to us as it is, hidden away from common perception by one veil at least, if not by two, according as the sense data are reckoned as one with or other than the object of common perception. And this latter—or the sense-data which make it up—corresponds to Locke's nominal essence composed of qualities relative to sense, and unlike their causes in the real essence. The physical object is

[1] Verbs and prepositions so far from being neglected have been a main source of categories from Aristotle downward. See Wallace, *Introduction to Hegel's Logic*, p. 371.

indeed, as I gather, meant to be defended against the further analysis into sense-data which was fatal to Locke's primary qualities, by being deprived of all intrinsic sense-data altogether. But even if this defence has a meaning (for sense-data are, surely, *ex hypothesi* conditional, so that to demand that they should be intrinsic is a contradiction) it resolves itself into a further step towards agnosticism. We are to accept a physical object apart from conditions of perception. The abstraction, that is, grows thinner and thinner. Mr. Russell is indeed eager to prove, as he thinks, against "philosophers" that a thing may be known to exist although we *do* not know anything of it. I do not think that this has been disputed. But the very differently worded formula on the opposite page (p. 68) which seems to be taken as equivalent to denying the above, beginning, "if matter were essentially something with which we could not become acquainted"—*i.e.* we cannot know to exist that of which we *essentially can* not know anything—this has been maintained and I think must be upheld. An old carpenter used to amuse children by saying, "Now I will show you something no one ever saw before," and cut a bit of wood in two. Certainly we could have known that its inside existed, even if it had been impossible to cut it open. But something which essentially we could not know (Mr. Russell says, "become acquainted with," but the meaning of the doctrine is deeper) is a miracle, that is, something the alleged conditions of whose existence contradict the conditions of knowledge, so that in as far as we prove it to exist, we *ipso facto* prove it not to be what it was said to be. Spencer's Unknowable is the typical case in philosophy.

Nor do I see that so obvious a principle need be denied in defence of Mr Russell's physical objects or matter. They seem to be fairly well connected with experience through the obvious sense-data which they cause. But if they are to be treated *qua* isolated unconditioned intrinsic existences, then I think they must be miracles, and cannot be known to exist. And I think this isolation is what Mr. Russell desires to insist on. He hints at another way of discovering their nature; but the qualification "intrinsic" still adheres to it (p. 54) and would cause the same difficulty.

However, there are physical objects, unknown except by inference and analogy, behind a single or double veil of perceived data and objects. Besides them we have minds, directly known only to their owners, and that by introspection, and universals, placed in a world neither physical nor mental. And there are self-evident truths of mathematics, logic, and morals, which remind us of those accepted by Locke in the same subjects. The statement that empirical philosophers strenuously denied the *a priori* character of mathematics can hardly be intended to include him.

Must not a scheme of realism which leaves standing such poor fragments of our things and truths, and those so arbitrarily selected, go the way which Locke's has gone? No doubt it is better guarded

against mentalism than his doctrine was; but immediacy and detachment, the heirs of mentalism, must surely do here the same destructive work which it did upon Locke.

What we who have been trained in another school miss alike in Locke and in Mr. Russell, is the point of view of the whole. Now this, I well understand, Mr. Russell intentionally rejects. It is only possible therefore to argue by pointing out what we take to be the disasters to which the rejection leads him.

He is obsessed, we should say, for example, by the conception of Idealism,[1] according to which what appears as matter consists either of minds or of mental states. Against this he repeatedly advances the doctrine that the object of mind need not itself be mental, in this sense. Now I imagine that to post-Kantian idealists in general this position will seem obvious; but they will be inclined to hold Mr. Russell himself unfaithful to it in the spirit if not in the letter.

For why does he accept sense-data as primary factors of knowledge, and yet reject them as constituents of a real external object, unless, in spite of his own insistence that they are not acts of sensation, he retains some prejudice that as mental states they must belong to knowledge and yet cannot belong to things? I observed above upon the doubtful treatment of light. True, they are criticised as being changeable, inconsistent, conditional. But for any one who recognises the conception of the whole, which is plainly involved from the first in the perception of an object, and apart from which the sense-data are not given at all, these data are not a primary basis, independent of the object, from which it is inferred, nor are they in the least inconsistent with each other, but, on the contrary, form a system as the obviously necessary outcome of varying conditions. If we ask, which is the real colour, the real shape, etc., of the object, the answer surely is, "All of them, according to their conditions, each to each". There is only a difficulty if we ask, What is the object as intrinsic or unconditioned? This is trying to get behind the whole by abstraction, and stultifies the inquiry into reality in a world like ours. Why should the object as apprehended not be an external object, as the whole system made known to us through sense-data, unless you think that sense-data are states of mind? And if science tells us that the wooden table, being further considered, must be held to be *also* "a collection of electric charges in violent motion," that does not make it any the less a real wooden table. You may consider a tree as an aggregate of cells and fibres; and so it is; but it remains a real tree in space all the same. I certainly have no doubt whatever that the wooden table, an object constituted by all its conditioned qualities and reactions as a whole system, is a perceived physical object in a perceived space, one with my private space. And, again, I should have sup

[1] For Green's characterisation of what amounts to this view of idealism, when advanced by Herbert Spencer, see *Works*, i., 386.

posed that most post-Kantian idealists would agree with me. Of course space and spatial objects as we perceive them are not for us ultimately satisfactory before metaphysical criticism. But this would tell us more about them ; it would not go behind them or deny their existence.[1] Here is one of my grounds for believing that if you want genuine hard Realism you can only get it from an idealist. Every one else picks and chooses according to some arbitrary standard, and ends by erecting a reality which leaves out nine-tenths of the facts ; because he does not believe that the real is the whole.

A similar comment suggests itself on Mr. Russell's doctrine of *a priori* knowledge. His criticism on Kant's view (p. 132) is almost word for word the same as Green's.[2] But Green lives up to it ; the question is if Mr. Russell does so. Both disown the idea of truth specially contributed by our own nature in the way of thought as opposed to the object. But Green infers from this the falsity in principle of the distinction between contingent and necessary truth, and the dependence of all truth on the whole system of experience—in short the coherence theory. Mr. Russell believes in a type and source of self-evidence dependent on isolated intuitions of relations between universals ; in the "correspondence" theory of truth, which, along with his theory of the physical object as known by inference, must mean that you test one isolated inference (your belief) by another (the "fact") without criticising the two by any common standard ; and in a doctrine of Induction which seems to me to combine both errors, by resting an uncritical method dependent on cumulative instances, upon an uncritical *a priori* principle affirming an increase of probability to be generated by such accumulation. This dualism of fact and *a priori* truth is not of course grounded in Kant's fashion ; but it rests on a prejudice like his.

And all that is wanted for Induction is so simple. Postulate here what is postulated in the account of knowledge by description (to be discussed below), that there is a true proposition about the phenomenon in question ; and further that some judgment can be formed as to the relative approximation of our knowledge to it, and the whole difficulty of uniformity vanishes. For suppose the laws of motion were going to cease to operate at twelve to-night, a true proposition about any phenomenon in which they are concerned would of course tell you so. You cannot interrogate nature except on the hypothesis that there is a truth about it, *i.e.*, that it is a whole ; and Mr. Russell's view leaves the interrogation of

[1] The argument that there can be no contradiction in space, because logic has proved all sorts of spaces possible, amounts to very little. Possibility is a matter of point of view ; from a very abstract point of view all sorts of impossibilities are possible. On given infinites see my *Principle of Individuality*, p. 394.

[2] *Works*, ii., 5.

nature entirely unaccounted for. Series of similar conjunctions are just what it does not rest upon.[1] Or again, every association indicates a law. And you cannot establish the true form of a law by accumulating unanalysed cases under the first indication of it.

In short, the Inductive principle assumed *a priori* has no connexion with the general basis of logic, and will not account for the conception apart from which actual Inductive practice would be impossible. The idea of the whole is needed for all knowledge and influences it *ab initio*, and is not an assumption but a truth revealed by analysis. And if it were an assumption or *a priori* principle, it would be better to accept it as one which does explain Inductive practice and all cognition, than Mr. Russell's principle, which does not explain even the former, and does not profess to explain the latter.

This notice is already too long, but there are still some important points which must be mentioned. The chapter on Knowledge by Acquaintance and Knowledge by Description[2] is fundamental for Mr. Russell's position. It has the merit of raising the question what is the place of immediate experience in knowledge. And the answer given is that it forms a separate and primary type of knowledge, distinguished as knowledge of things by acquaintance from knowledge of truths, than which it is essentially simpler.

We have knowledge by acquaintance of sense-data outward and inward, of the past through memory, and of certain universals. We have not acquaintance with physical objects proper, nor with other people's minds. Acquaintance is the foundation of all our knowledge, both of things and truths. Knowledge by description is, if I grasp it, the way in which we use knowledge by acquaintance as a substitute, so to speak, for the direct knowledge of things which we have never experienced. We describe, in terms with which we are acquainted, the true proposition which we know there is,[3] and which we should like to make, but with the actual object concerned in which we are not acquainted. I cited above the instance of Julius Cæsar. We cannot speak about *him* because we have not introspective acquaintance with his mind; and even those who saw his living body had not direct knowledge of it, for it was a "physical object," still less of him.

This, I said, is fundamental. No doubt our private and peculiar experience is somehow used in our knowledge of what is beyond it. Others know the same things through other private experiences. (I do not mean to admit that what we experience, *e.g.*, in sense, is not continuous with what others experience.) This is clear. But

[1] See for the true view, Green, *Works*, ii., 6.

[2] *Cf.* Locke, Essay iii., xi., 21.

[3] This suggestion, as I said above, seems to me most important. We only have to extend it to all objects, and the system of truth rises up single and systematic against the chaos of data and physical objects and self-evident principles.

the question is how to state the connexion. What Mr. Russell has done is to separate out the supposed data from the wholes and truths in which alone we apprehend them, and to erect them into a first line of knowledge, the foundation of all other.

Now this first line of knowledge, if it is knowledge at all, is of course extraordinarily meagre. (And our knowledge of the second line, which contains practically the whole of our substantive cognition, is not admitted to apply to actual objects at all.) Thus between the two our awareness of truths about things falls to the ground. The first line of knowledge is of "things," but tells us no truths; the second tells us truths, but not about actual things.

Surely the error is in treating pure acquaintance, apart from judgment about wholes, as knowledge at all. It is admittedly not expressed in judgments, and I feel sure that the attempt to elicit judgments from it which preserve its alleged self-evidence must fail. (See the discussion on self-evidence of memory and perception ch. xi. I read the result differently from Mr. Russell.) It cannot be got at as separate knowledge. "It is rather a factor in all knowledge, by which thought is specified to certain objects.[1]" And if our knowledge is true, it is of the actual objects, systems which cannot be cut down to the terms of our acquaintance with them. It seems to me, I confess, absurd to say that only Bismarck could make a judgment of which he himself was a constituent. The self is a complex system, like other objects, and may be known from many points of view with equal grasp of its real being.

I have already referred to Mr. Russell's well-known theory of truth and falsehood. It has a strong point in recognising that there is no objective falsehood, but that a false belief is a belief that real objects are related otherwise than as they are. It is not out of jealousy of priority, but to defend my *bona fide* belief in the kinship of robust idealism and thorough realism, that I point out what seems to me the same doctrine in Green's argument that there is no unreal world, but only mistaken judgments as to the relations of real things.[2] "A confusion of relations" was, as I remember from lectures, Green's short working definition of error.

On the other hand, the point that truth is prior to coherence does not impress me greatly. What the Law of Contradiction does is just to say that truth is not self-contained in any proposition, but depends on the character of not being denied, all things considered. The appeal to non-negation *is* an appeal to coherence. The idea of the whole thus governs the conception of truth *ab initio*.

The criticism of Hegel, therefore, seems to me not to meet the point. It is really based on taking the nature of a thing to be bounded by what can be known of it through acquaintance. But the implied distinction, we have seen, is vicious, and in asserting truths you are asserting about the actual thing. You may be wrong;

[1] I am here following Prof. Stout. [2] Prolegomena, sect. 23.

indeed the whole process is one of correction. That is inevitable. You find yourself in a contradiction; you must say something, and it must not be contradictory; therefore you must go farther, and contrive a reconciling truth; that is all. Plato describes the process quite clearly, and shows how it leads up to the fullest and most living concrete. Mr. Russell's interpretation of the 'Forms' I hold to be on the whole a misrepresentation, though not without support in Plato. And his limitation of universals to abstractions, excluding individuals, I take to be one of the arbitrary distinctions by which he truncates experience.

This logical error, as I must hold it to be, affects profoundly his conception of the contrasted worlds of universals and of existences (p. 156). It is a dualism which divorces the being and logic of his universe from its life and love. I cannot say how deeply I regret that such a doctrine, absolutely fallacious, as I hold, in logic, and in its general bearing a mere formulation of popular prejudices,[1] should go out to the world with Mr. Russell's great authority. The typical universal is surely Plato's ἔρως or his ἀγαθὸν, the all-pervading pulse at once of thought and of desire. What Mr. Russell calls universals seem to me to be just the barest outlines of the substructure of the world, and to have a comparatively slight claim to the character of wholeness and pervasiveness which marks the true universal.

I referred above to Mr. Russell's view of the limits of philosophical knowledge. I strongly agree with it as against many theological philosophers; and I also accept in a very large measure his estimate of the value of philosophy, which seems to me very finely expressed. Only I am not sure what application he has in mind when he censures philosophies which recognise in the universe nothing alien to the Self. The ideas, say, of Plato, Spinoza, Hegel, Bradley, might equally well be described either in this language, or, in the phrase which carries Mr. Russell's approval, "the union of Self and not-Self". It would in my judgment be a very serious error to censure philosophies like these as treating the self in a way which makes it an obstacle to freedom of thought, and I am inclined to believe, as also I hope, that Mr. Russell has not committed it.

BERNARD BOSANQUET.

James Hutchison Stirling: His Life and Work. By AMELIA HUTCHISON STIRLING. London: Fisher Unwin. Pp. xii, 379.

FRIENDS and admirers of Stirling will readily acknowledge their indebtedness to Miss Stirling for this record of a life given with rare strenuousness to the advancement of speculative philosophy

[1] *Cf.* James' student in my *Principle of Individuality*, p. 10; James' *Pragmatism*, p. 21.

in this country and in the English-speaking world. The book is written from the inner sanctuary of the family circle, and while the story is naturally coloured by emotional intimacy with the subject of the memoir, the writer has clearly endeavoured to maintain an objective manner of treatment, and to present the narrative with as much detachment as is consistent with the reserves of kinship. The result is a biography of Stirling to some extent of the kind which one can imagine Stirling himself to have written, though without the graphic peculiarities of such an autobiography. The estimate of the significance of the various events and incidents recorded was very probably Stirling's own estimate of them; the judgment of the value and place of his work was in all likelihood the judgment which Stirling himself would have held; the philosophical conclusions, positive and negative, enunciated are in substance undoubtedly in the line of Stirling's own thought.

One might say Miss Stirling has erred more by what she has eliminated than by what she has inserted. In a biography of a scholar one looks for the inner history of the character and mind of the man, as distinct from his declared and published opinions which have already secured the attention of that part of the public interested in them. There is much less of the former and rather more of the latter than the admirers of Stirling could have wished from his biographer. In the narrative of the outwardly uneventful life of an almost solitary scholar like Stirling the main interest must necessarily lie in the detailed record of the private opinions, characteristics, or even idiosyncrasies which give vividness to the actual life and to the written portrait of the man. The main lineaments and features are, however, here drawn with considerable success, and for this the interested reader will be grateful.

Every man is said to be the focus of his environment; and this is certainly true of Stirling. It would be difficult to imagine how such a man could have lived his life outside the region of the desperate enthusiasms which constitute as they have conditioned so much of the best in Scottish character and history. With all his immense learning and uncommon penetration, the ground plan of his nature, formed and composed of national and ancestral elements, remained unchanged to the last. His sensitive, fractious independence of spirit, with its self-contained detachment, was supported by an unbending resolution of will, and pervaded by the deep religious instincts of his people. One of the main things which from the first attracted him towards Hegel was that Hegel had, "above all, reconciled to philosophy Christianity itself. *That struck.*" In opening the lectures on the Gifford foundation at the close of his career he gladly avows himself a "member of the national church" and in doctrine an "evangelical". Like many another Scotchman who has been drawn to metaphysics, he was concerned to find an Absolute that was equal to the requirements of the Confession of Faith and the Shorter Catechism, and having

satisfied his mind on the point, he was then ready to chant the words of Simeon of old with perfect confidence. Of an intense positive temperament, Stirling early in life took himself and his purposes very seriously, and was peculiarly adapted by nature for that stubborn attempt to think to the uttermost which constitutes the prevailing mood of the metaphysician. While capable to an unusual degree of laborious patient investigation, he was constitutionally incapable of resting content with a negative or half-negative result. This largely accounts for his ruthless and incessant assaults on the half-truths of the *Aufklärung*, and for his scornful contempt for the contemporary empiricism of his day. To both of these movements he probably did less than justice, because of his temperamental bias towards positive conclusions. In his philosophical antipathies he did not remain satisfied to win his case at the bar of pure reason; he pilloried his victims on a metaphor which brought in laughter to the assistance of logic, and left discomfiture to complete the work of conviction. While there can be little doubt about the feelings of the public, only conjecture can describe the emotions of Mill and Bain as they read Stirling's article in the *Courant* in 1870, with its concluding sentence: "It is quite curious to watch Mr. Mill and Mr. Bain in what they think philosophising—Mr. Mill concealing himself from his own presuppositions behind the shadowy heads of a ghostly asparagus-bunch of possible sensations; and Mr. Bain, with a sobriety of aspect that becomes the occasion, intently milking . . . his own biceps into Time and Space".

Stirling was a man of singularly versatile mental endowments, with a sinewy strength of intellectual endurance and great powers of concentration. He was familiar with most of the fields of science, and probably could have proved himself successful in any of them. It was always a legitimate satisfaction to him that he was a serious rival to Kelvin in the mathematical class in Glasgow University; and at least one distinguished mathematician has acknowledged that, in the controversy with Whewell and Robertson Smith in later years over Hegel's criticism of Newton's view of the calculus, Stirling had the best of the dispute. He had a scholar's knowledge of several languages, and a very living interest in the literature of his own country. A being with such varied capabilities must have found the problem of selecting a definite *métier* in life one of singular difficulty. In a sense one might say he never really found his peculiar sphere in any of the recognised departments of activity, and to the last remained outside all of them, imposing his own tasks and duties on himself. This is in some respects to be regretted, in other respects it was a gain; and in any case it makes Stirling's great achievements all the more remarkable. Whatever success he may have had as a doctor of medicine, there can be no doubt that the type of work most after his own heart was that of a teacher of philosophy in a University.

He took his defeat as a candidate for the Edinburgh Chair very bravely; but that was probably the disappointment of his life. His non-election showed a strange lack of sound judgment on the part of the electors, and was undoubtedly a serious loss to Edinburgh University, and to Stirling himself. Teaching would have compelled Stirling to think more simply and more concretely, and would have removed most of the transparent singularities in his style of writing which, largely owing to the isolation of his life and work, tended to take the form of a public monologue. Moreover, Stirling had a very vivid and clear insight into Ethics (the subject of the chair); his volume of *Lectures on the Philosophy of Law* (1873) is perhaps the most luminous and valuable of all his writings.

It was natural that a man of Stirling's varied gifts and resources should have thought of and tried many avenues of activity before finally settling down to the task that called forth his best energies. Some of his early literary efforts and ambitions were perhaps less due to a want of perspective than to a want of knowledge of his own real powers. His correspondence with Carlyle in this connexion is interesting mainly for the light it throws on Carlyle's good practical sense in dealing with such a correspondent. Specimens of Stirling's attempts at literature, poetical and otherwise, are given in the earlier chapters of the volume. He had no interest in literary form, as he confesses in so many words (pp. 137-138); and, while possessed of an abundance of telling, picturesque imagery, he seems never to have cared for the fine art of literary expression, and certainly cannot be said at any time to have practised it. His best and most continuous pieces of writing (the "Conclusion" of the *Secret*, and the "Reproduction" of Kant in the *Text Book to Kant*), are sustained flights of impressive philosophical exposition, and in the nature of the case do not lend themselves to adornment or eloquence in order to be effective. Such style as he may be said to have had was largely formed or fostered under the influence of Carlyle, for whom he always retained the deepest admiration from youth to old age. No doubt many of Stirling's idiosyncrasies of style are traceable to Carlyle, the Carlyle who appeared in *Sartor* and the succeeding works: and it can hardly be held that such an influence was anything but prejudicial.

It must always seem a kind of happy accident that led Stirling to undertake what proved to be his life-work—the study and exposition of Hegel and German Philosophy. There was nothing in his preceding life-history, at least so far as can be gathered from his biography, which called for a comprehensive metaphysical system to satisfy a deep-felt spiritual need. He appeared to be mentally at peace with himself when the inheritance of a competence induced him to give up professional work and go abroad to read. His religious life seems to have been securely established

very early, and does not appear to have been seriously shaken at any time. And even after his task of studying and expounding Hegel was completed, he definitely declares, "I have not sought, and do not seek, to be considered a disciple" [of Hegel] (Schwegler, *History of Philosophy*, 11th ed., p. 445). Perhaps some light may be thrown on the matter by his remark in the same context "my position in his [Hegel's] regard has been simply that of one who in making the unintelligible intelligible would do a service to the public". This, taken along with the passage in the biography (p. 115) already referred to, seems to indicate that he undertook the stupendous task which he carried to a finish, first of all to see how Hegel had "reconciled to philosophy Christianity itself," secondly in order to bring to the light of day the dark enigmas of an apparently impenetrable system of philosophy, and thirdly perhaps to gratify an intellectual curiosity of a high order. He had free time on his hands and nothing to lose by failure, if he should fail; and he had inexhaustible patience, intellectual ambition, and the indomitable resolution which refuses to be turned back once it has set its hand to the plough. He seems to have known little German before he went for the year's stay in Heidelberg, 1856-7, where the task was begun. On the whole, therefore, it seems remarkable that an undertaking, the outcome of which was of such great moment for the study of philosophy in this country, should have had its origin in such apparently contingent circumstances.

We need not rehearse here the story of the intellectual struggle through which Stirling passed before light came, and with it the secret for which he was in search. Apart from the brief references in the biography, the record of the struggle is set forth in the first five chapters of the *Secret of Hegel*. The composition of the work took a year and two months, and it at length appeared in 1865. It was received on its appearance with mingled admiration and astonishment; and as an intellectual feat it will always stand by itself in the annals of philosophical literature.

If there is a kind of genius required for luminous exposition of a man of Hegel's dimensions, then certainly the *Secret* is a work of genius. Those best know its value who have trodden the mazes of intellectual perplexity and have come to Stirling in their hour of need. No one has ever done for Hegel and for German philosophy what Stirling accomplished in the *Secret*. But it is not for every one that the book was written, nor to every one that it makes a responsive appeal. To some it has been indeed the wine of life; to many others it is the waters of Marah and wholly unpalatable. Its unattractiveness to the generality of readers even capable of understanding it, is due not so much to the difficulty of the subject, as to the manner of presenting it. Stirling after long seeking at last struck the right clue for getting at the source of his author's meaning, *viz.*,—the close historical connexion of Hegel with his more immediate predecessors. Stirling was never weary of laying

stress on the importance of understanding this clue, or, as he used to put it, assimilating the "Historic Pabulum". What he never seemed to realise was the equal importance of showing the intimate connexion of Hegel's philosophy with everyday thought, with common sense, and ordinary scientific and religious notions. Without this the strangeness and aloofness of the system from everyday life remained unremoved; and the historical setting of Hegel's thought, so far from bringing the system into touch with life, seemed merely to relegate it to the past and to connect it with "old unhappy far-off things" which people might as well forget. And in endeavouring to meet the reader half-way, it has always seemed unfortunate that Stirling should have done little more than reprint the notes made during his own personal struggle to understand Hegel and present these as the first five chapters of the work. Valuable as they are, these notes are mainly of autobiographical interest and of psychological significance. What was wanted by way of introduction was an analysis of the steps by which Hegel's own system arises from and is continuous with the thought of everyday experience in all its aspects. No one has ever been better equipped than Stirling for such an undertaking, and, at the time he wrote, probably no one but himself could have done it. The truth seems to be that he was so intent on getting to the centre of the system that, once arrived there, all else seemed of slight importance, and the reading public almost forgotten. He spoke from a secure vantage ground of his own, and the public was left to follow him as best it could. To some extent he sought to remove this defect in the *Secret* in his repeated restatements of Hegel's position in his later works, more especially in the most important of his latest writings, *What is Thought* (published in 1900). But the defect seems never to have been quite removed. He was so clear in his own mind about what Hegel meant that he hardly seemed to see the point of the difficulties raised by others. A crucial question, for example, was put to him by one of his correspondents, and his letter in reply (*Life*, p. 346 ff.) seems anything but a satisfactory solution of the difficulty.

It is remarkable that in the *Secret*, which professed to give the Hegelian system in "Origin, Principle, Form and Matter," so little is said about any part of the system except the *Logic*. The *Philosophy of Nature*, which has always been the danger zone for the enemy of the system, was hardly considered in the *Secret;* and much the same may be said of the *Philosophy of Art*. Stirling's most luminous exposition dealt mainly with the *Logic* and the ethical and religious aspects of the system. In the *Logic* he found the secret principle of the system, and the ethical and religious aspects were dealt with mainly by way of showing the bearing of that principle on certain recognisable concrete spheres of experience.

Stirling was never weary of explaining that the secret of the

system lay in the *Notion*, and he endeavoured with an abundance of illustration to show what this meant. His view of the principle agrees substantially with that of others who have sought to interpret the system, and Stirling's grasp of the principle has never been surpassed in penetration and vividness. But to the last he insisted that his interpretation was merely that of an expositor of Hegel. He did not profess to be convinced of the truth of that principle on its own merits. On the contrary, he frankly says (*Schwegler*, note on Hegel), "whether that notion be really the pulse of thought —that is what is still to be verified—that is what I still doubt. So long as that doubt remains I am not properly an Hegelian." It is not clear from the biography nor from his later writings that this fundamental doubt was ever removed. He says, indeed (*Life*, p. 373), that "Hegel's act is, probably, as the opening of the final seal into the consciousness of man". But to the last Stirling was more interested in expounding and illustrating the importance of Hegel's contribution, especially as against Kant and the *Aufklärung* than in criticising the value of Hegel's principle and method.

It is impossible to do even approximate justice to Stirling's writings which appeared after the *Secret*. Some of these have long been recognised as of great importance, more particularly his elaborate exposition and criticism of Kant, and his critical analysis of empiricism in its various forms. His study of Hegel had matured his powers to a degree of strength which made his later work comparatively easy for him, while his command of the history and logical resources of philosophy made him a very successful exponent and a most trenchant critic. His criticism of later naturalism, *e.g.* in *Darwinism, Workmen and Work* (1894), seems, however, to have created no impression on the naturalistic school, mainly, perhaps, because Stirling's mental antipathy to naturalism led him to do less than justice to its method and results and hardly even to take it seriously.

Of Stirling's own philosophical views, it is not easy to gather much that is new from the biography. He had an opportunity given to him in the Gifford Lectureship to offer his own independent contribution to the interpretation of the great questions of philosophy: but whether it be that the task by that time (1889) was beyond him, or that constructive effort was not his *métier*, in any case the result from this point of view was not considered a success. He describes his religious position in a letter (p. 319) as that of "the Hegelian Right," "philosophical Christianity from the idealistic standpoint": "I have in the *Begriff* what the ordinary man has in the *Vorstellung*, and the historical facts are common to us both". What this means in actual experience he seeks to explain in a letter (p. 321) apropos of the atonement, and in another (p. 323) apropos of the resurrection. In both cases while Stirling's *Begriff* is doubtless the truth, there seems a gulf fixed between it and the *Vorstellung*. On immortality he remarks that "the one argument is simply

the divinity of the Universe" (p. 322): and in the *Secret:* "it is no more absurd that you should be continued than that you *are.* That you *are* is the guarantee of your *necessity* . . . why should not the death of the body be the birth of the spirit?"

We have left no space to deal with Stirling's friendly intercourse with some of the greater minds of his time. The record of this forms a very interesting feature of the biography of one of the most remarkable men of his time.

J. B. B.

———

Essays in Radical Empiricism. By WILLIAM JAMES. Longma Green & Co., 1912. Pp. xvi, 283.

THIS book consists of a collection of reprints, with a preface by the editor, Prof. Perry. Most of the essays in the volume were collected by William James himself in an envelope with the title which Prof. Perry has given to the book. Some of them were subsequently reprinted, in whole or in part, in *The Meaning of Truth* and in *A Pluralistic Universe,* but they are rightly included here in order to give as complete a view as possible of the doctrine called "Radical Empiricism".

"Radical Empiricism" is not the same thing as pragmatism or humanism: in William James's mind the two were connected, but he admitted that one might hold the one without the other. Prof. Perry, in his Preface, quotes the summary from the Preface to *The Meaning of Truth.* According to this summary, Radical Empiricism consists of (1) a postulate, (2) a statement of fact, and (3) a generalised conclusion. The postulate is that only things definable in terms drawn from experience shall be debatable among philosophers. The statement of fact is that relations between things are just as much matters of direct particular experience as the things themselves. The generalised conclusion is that the parts of experience hold together from next to next by relations that are themselves parts of experience. The postulate is not intended to rule out the possibility that there may *be* "transempirical" objects, but only methodologically to exclude the consideration of them from philosophy (p. 241). The statement of fact and the generalised conclusion distinguish James's empiricism from the more atomic traditional empiricism of Hume and his followers; they may, I should suppose, be now accepted as indubitable. With regard to the postulate, it is evident that its truth or falsehood must turn on the meaning given to that very slippery word, "experience". On this subject one could wish that James had been more explicit. He seems to regard "experience" as something simple, with which we are all acquainted. I cannot help thinking that, in the first two essays (which are the most important in the book), the failure to analyse "experience" has concealed important difficulties in the views advocated.

The first essay, called "Does 'Consciousness' Exist?" contends that the dualism of thought and things is an error: that the very self-same entity is at once a table and the perception of a table. The distinction between the mental and the physical, James says, s a distinction of context and function. When I perceive a table, the table is physical when regarded as part of the chain of physical causation, but mental when regarded as physically inefficacious and merely one of *my* events. There is no stuff out of which thoughts, as opposed to matter, are made; pure experience is the only stuff of the world; what distinguishes consciousness is a certain *function*, namely the function of *knowing*, which is a relation between different parts of pure experience. Locke's use of the word "idea," James says, began the tendency to obliterate the traditional dualism, and Berkeley continued it. It would be a mistake to name the doctrine materialism, or to name it idealism; both these names operate within the distinction of mental and physical, whereas with James there is an absolute identification of the mental and the physical, giving to each the characteristics of the other, making alternately the impression of materialism and of idealism, according to the context.

"What possible meaning," James asks, "has it to say that, when we think of a foot-rule or a square yard, extension is not attributable to our thought?" (p. 30). Again: "Mental fire is what won't burn real sticks; mental water is what won't necessarily (though of course it may) put out even a mental fire" (p. 33). When it comes to accounting for our apparent immediate awareness of thinking, James is ready with an answer. "The stream of thinking (which I recognise emphatically as a phenomenon) is only a careless name for what, when scrutinised, reveals itself to consist chiefly of the stream of my breathing. . . . Breath, which was ever the original of 'spirit,' . . . is, I am persuaded, the essence out of which philosophers have constructed the entity known to them as consciousness" (p. 37).

The second essay, called "A World of Pure Experience," further describes the identification of the mental and the physical, and explains what, on this theory, is meant by "knowing". There is nothing that should be called "knowing," we are told elsewhere (p. 204), in "absolutely terminal experiences," if such experiences could ever be reached. Knowing always involves two experiences (which may, however, be the same experience in different contexts), and definitely felt transitions from the one which is said to know to the one which is said to be known. The knower and the known, we are told (p. 53), (1) may be the same piece of experience in different contexts, (2) may be two pieces of *actual* experience of the same subject, or (3) may be respectively an actual experience and a merely possible experience to which conjunctive transitions would lead if prolonged.

This theory, with its rejection of the traditional dualism, is

certainly profoundly original and profoundly interesting. Its truth or falsehood, so far as I can see, does not stand or fall with that of pragmatism, though its truth would make pragmatism much more plausible. A really new theory in philosophy comes always with a shock, and I must confess that, after many efforts, I cannot conceive the facts as William James does. His hypothesis, in any case, deserves to be elaborated; and until it has grown more familiar, it would be rash to feel too sure that it is false. But, since the view has many advocates among those who owe their philosophic education to Harvard, it may be worth while to point out some objections which ought to be definitely answered, though they appear to have been entirely absent from James's thoughts.

Let us consider, for the sake of argument, the occurrence of a perception—say of a table. It is possible to take the view that the fact is constituted by *three* elements, act, content and object; or we may eliminate the content, and have only *two* elements, act and object; or we may also eliminate the act, and have only *one* element, the object. The first of these three views is advocated by Meinong, the second is the one I should advocate, the third is James's view. (When I speak of the "object," I do not mean the "physical" object, if any, which science *infers* from what is given; I mean the coloured surface which is seen.) James's arguments for his position, if I have not misunderstood them, seem chiefly effective in eliminating the "content". He seems concerned to show that the object is given without any "mental" intermediary. But if this be granted —as I think it should be—it still does not follow that there is nothing distinctively mental. To be "given," to be "experienced," is not the same thing as to "be". To be "given" or "experienced" seems to imply a subject, to be in fact constituted by a relation to a cognising act. Tables and chairs and other bits of matter might, it would seem, exist and have relations without there being any "experience" or "knowledge". James will not regard immediate perception as knowledge, though he does apparently regard it as "experience"; his reason being, so far as can be discovered, that he thinks knowledge must be round-about. Thus he does not regard "experience" as in its nature a relation, of which one term must be what we call "mental". The processes of leading, which he regards as constituting knowledge, seem to include cases which cannot be called knowledge, and to exclude cases which must be so called. He says: "To call my present idea of my dog, for example, cognitive of the real dog means that, as the actual tissue of experience is constituted, the idea is capable of leading into a chain of other experiences on my part that go from next to next and terminate at last in vivid sense-perceptions of a jumping, barking, hairy body" (p. 198). But merely holding a bone in my hand, without thinking of the dog, may have the same effect; and it seems paradoxical to maintain that I do not know the dog when it is actually present, which I gather James would have to maintain.

There are, of course, various empirical reasons of detail for supposing that what is immediately presented in sense is not the "physical" object which physics deals with. But these reasons, which may or may not be valid, are concerned with a far less fundamental problem than that which James is discussing. In considering his problem, it is simpler to concede the view of naïve realism, that the actual object dealt with by physics is immediately given. This, so far as I can see, is all that James attempts to prove. But this by no means proves that "experience" is not a relation, involving something over and above the object, something *to* which the object is given, *by* which it is experienced. It is this something, if anything, that is mental; and it is this something which James ought to have disproved. On grounds of the purest empiricism, from mere inspection of experience, I for my part should hold it obvious that perception is in its intrinsic nature a fact of relation, involving an act as well as an object. For this reason, I cannot accept James's view, in spite of its very attractive simplification of the world.

The third essay, on "The Thing and Its Relations," argues against the current idealist view that no one thing can stand in two relations. "It really seems 'weird' (he says) to have to argue . . . for the notion that it is one sheet of paper . . . which is both under my pen and on the table while I write. . . . Yet I sometimes suspect the absolutists of sincerity" (p. 105 n.). The fourth essay applies the result of the third to show that it is logically possible for two minds to know the same thing—a question also briefly discussed in the second essay, where a cursory consideration of the empirical difficulties leads to the conclusion (on grounds which seem not very decisive) that two minds can perceive at least the same *space* (p. 84), though probably not the same objects in space.

The fifth essay is on "The Place of Affectional Facts in a World of Pure Experience"; in this essay the James-Lange theory of the emotions is used to prove that they need not be regarded as purely mental. The sixth essay on "The Experience of Activity," which has already appeared in "*A Pluralistic Universe*," is very interesting; there is a beautifully clear account of the psychological experience of activity, with a rejection of any supposed metaphysical principle of activity.

The seventh essay, on "The Essence of Humanism" and the eleventh, on "Humanism and Truth Once More," belong more to the familiar field of the pragmatist controversy. The eighth, in French, on "La notion de conscience," adds little to the first two. The ninth is called "Is Radical Empiricism Solipsistic?" (the answer being in the negative); the tenth refutes "Mr. Pitkin's Refutation of 'Radical Empiricism'".

The last essay in the book, called "Absolutism and Empiricism," is much earlier in date than the others, having appeared in MIND

in 1884. It explains James's emotional reasons for disliking Absolutism, and is exquisitely witty. I will not spoil the sale of the book by quoting the story of the two curates at a funeral, or by explaining why Hegelianism is like a sea-side boarding-house.

The book, like everything by its author, is interesting and delightful to read, full of brilliant flashes, humour, and quick insight, but impatient of plodding careful argument or analysis. I cannot believe that empiricism, however radical, requires that we should deny the difference between mind and matter; but otherwise most of the book is such as any modern empiricist must agree with.

B. RUSSELL.

VII.—NEW BOOKS.

Life's Basis and Life's Ideal. By Rudolf Eucken. London: Adam & Charles Black, 1911.

In the German original, this book is entitled *Die Grundlinien einer neuen Lebensanschauung.* Its contents are not so much philosophy as a philosopher's reflexions on the human lot, and may well serve to popularise the author's message as a whole. The work opens with a criticism of five systems or schemes of life which may be picked out of the modern chaos. Two are old, three are new, but all fail in doing justice to self-consciousness. Other-worldliness makes the old religious system alien to the monistic tendencies of to-day, while Immanent Idealism has shut its eyes tightly to the dark facts of nature, necessity and passion. Naturalism, on the other hand, pretends to explain knowledge and love apart from psychical activity; of it we may say, paraphrasing the witty Frenchman: "If there were nothing but Nature, there would be no Naturalism". Socialism, as a philosophy of life, deifies the average man and is blind to originalities, in flat contradiction of the fact that no real advance in religion, science, or art has ever been initiated by a combination of the majority. Finally there is Æsthetic Individualism, claiming in equal measure to spiritualise the sensuous and to sensualise the spiritual, and banishing pain by the simple device of saying not a word about it. It has no sense for the deeper divisions of the soul. The justice and magnanimity of this criticism will be admitted by most readers. Each movement is tried by its own ideal, and allowance is made for the half or three-quarters truth which it represents.

In contrast to these divergent currents of theory, Eucken holds, there is felt on many sides "a thirst after a more forceful reality, and a more imposing immediacy of life" (p. 81). We are in a strait betwixt two, and it looks as if we had to choose between fullness of reality and inner unity of experience. Under these conditions, "no external compromise can help us, but only the winning of a transcendent position which is capable of giving to each factor its right without reduction". The only plan is to try for a new system of life. Life must be seen as reaching a solution through its own organisation and construction, its own progress and creative activity.

In the sketch of a new theory which follows, the word "life" occurs with a rather tedious and disconcerting frequency. Whole pages come of which a sentence like this is fairly typical: "All the rousing of forces, all the passing backwards and forwards between subject and object that we experience in the immediate condition of life, does not lead beyond interaction, and yields no content: it does not raise life to a self-conscious and self-determining life, so that, in spite of all its activity, our life in this condition remains inwardly alien" (p. 159). The term now and then becomes a mere catchword, and sinks into the equivalent of vitality or

movement, with the result that the distinction between the spiritual and the non-spiritual, which Eucken is peculiarly anxious to maintain, tends to be lost again. "Morals and religion," says a recent writer on Sophocles, "are to him neither the foundations nor the superstructure; they are elements or functions of the one amazing and incomprehensible thing, the one thing that matters, the one thing that is—life". It is a fathomless miracle, and Eucken would have us gaze upon it. For him there is nothing beyond life or greater than life. It is life which gives to knowledge its detailed forms, its specific character, its aims. The chief motive-power of culture is the longing for a new kind of life in contrast to that of nature.

Life, however, at its highest is "spiritual life"; and this introduces the author's pivotal and organising idea. Of this abstraction Baron von Hügel has said truly that everywhere in Eucken's writing it is treated as though in itself it were the most fruitful of realities. Apart from the permanent existence of persons there is no such thing as value, for spirituality and value are but two aspects of one reality; but we should scarcely learn this from Eucken, at all events in the decisive preliminaries of his argument. Not that the abstraction is purely formal, a kind of *Bewusstsein überhaupt*. On the contrary, the "spiritual life" is represented as independent of man, securing for him indeed a real relation to the world; it transcends all isolated individuals; it develops into a reality, a kingdom, a world, so that to partake in it is to rise into something cosmic; it is alike transcendent and immanent, and becomes polarised, so to speak, at finite centres, for "a genuine self is constituted only by the coming to life of the infinite spiritual world in an independent concentration in the individual" (p. 186). I cannot myself quite understand the relation of this "spiritual life" to what religious men call God. Apparently the relation is not that of identity, since spirituality is the element in which God lives as well as we, and epithets are constantly applied to it which mean that it is a growing, advancing and presumably imperfect entity or fact. The spiritual life, we are told, is "the self-consciousness of reality" (p. 263), yet it has to become independent of man (p. 144), and yet again religion has brought man into union with the deepest basis of reality, which presumably is real, and does not merely await realisation. One cannot but suspect a failure to distinguish between the Perfect Life which we believe in and adore as object and the spiritual being we ourselves enjoy. Much of the argument hinges on this ambiguity and is of dubious value for that reason. Now and then it seems as though we men were engaged in making deity.

One of the best things in Eucken's general view is his conception of history as the laboratory or workshop of the real. He rises clean above the traditional philosophic notion to which the human past is but secondary and eventually non-significant change. A very suggestive page is that (249) in which he urges that Kant's transcendental method, which Kant himself applied to science, morality, and the sphere of art, should be extended to the historical development, and should take up such problems as the intrinsic possibility of history, the conditions under which the historical manifold is unified, and the spiritual activity energising in the whole and combining the discrete elements in one. In other words, reality is not simply given but made as we live and act; yet neither is this the entire truth, for change is only of the permanent. "As the spiritual life cannot develop a content without presenting it as timeless, there is no great achievement in history that does not include some kind of timeless truth, and the movement of the spiritual life is not merely a flowing onward with time but also an elevation above time" (pp. 250-251). Stability is imparted to the human movement by the dis-

covery and appropriation of an all-embracing task which gives inner laws to life. Only in view of the future do we possess the past, and with a change in our goal the past also comes to have a changed significance. Here we find that readiness to acknowledge paradox in the deeps of experience which is one of the most engaging aspects of Eucken's thought.

Eucken makes a profession of faith in Activism, but he is careful to mark it off from all mere Voluntarism and Pragmatism. Like them, Activism rejects the intellectualistic view of things, but it does not hold that of itself the will yields a new world, nor, with Pragmatism, does it take man as starting-point in the search for truth. It insists, rather, that in the quest for truth man exalts himself above himself, not receiving a given world to which mind merely plays an *obligato*, but accepting and waging the appointed warfare with confusion and irrationality, and thus imparting to life a dramatic rather than a lyric character. Victory comes as we change the centre of our own life, finding true immediacy no longer in sense-impressions, but in self-determined activity. From this point of view the problem of thought and of religion is the same. Both, confronted with the inexorable "either—or," must choose between the ideal of passiveness and of spontaneity. "Either the power of a new world is operative in man, and makes him strong outwardly and inwardly, or the whole life of man is spiritually lost—one great illusion, one great error" (p. 331). Spontaneity must be chosen if there is to be progress, and religion has proved itself man's best friend by its steady witness to the fact that our transcendent relations are such that new beginnings, implying real alternatives, are genuinely possible.

If any one feels this vague and lacking in what may be called philosophical technique, I can only say that the book itself makes precisely that impression. An opaque and elusive air broods over Eucken's work. It is questionable whether in these later books which pour so rapidly from the press he is adding much of consequence to the teaching of the great books which made him famous—the *Lebensanschauungen der grossen Denker* and the *Grundbegriffe der Gegenwart*. But in spite of the obscurities and reiterations of the present volume, it ought to carry his message abroad to a wide circle.

The translation is only fair, and might easily have been better. Its general accuracy need not be called in question, but it cannot be said to be written in a flowing or idiomatic English style. As the translator invites correction, the following infelicities may be noted here: "This we cannot do without raising the problem of our relation to reality, and, if it is in any way possible, to mould the relationship in a new way" (p. xxi); "we were led to the view that the object appeared different because we ourselves placed something different into it" (p. 106); "primarily necessarily" (p. 189); "to remove us from a happening between things to their fundamental happening" (p. 135); "the highering of the ideal" (p. 341). One feels the German far too plainly through English of this kind: "A whole sphere can be withdrawn from the confusion and used to overcome it just as little as can a single leading point" (p. 94). To a careful reader, however, the translation will convey the thought of the original, and Mr. Widgery has written a useful if brief introduction.

H. R. Mackintosh.

Modern Science and the Illusions of Professor Bergson. By HUGH S. R. ELLIOT, with a Preface by Sir Ray Lankester, K.C.B., F.R.S. Longmans, Green & Co. Pp. xix, 257. Price 5s.

Sir Ray Lankester in his preface to this book is very scornful of metaphysicians, and very indignant with some of us for the "ingenious and systematic advertisement" by means of which we have misled "a section of the English public" into the belief that M. Bergson is a "'great French philosopher'". In his view a metaphysician is a curiosity or monstrosity without any claim on that account to the title 'philosopher'. He thinks us for the most part harmless enough, amusing ourselves by blindly groping for a factor x outside the mechanism of Nature. He is greatly pleased with the old gibe against metaphysics that it is like "a blind man in a dark room hunting for a black cat which—is not there!" He does not tell us who the "keen thinker and great lawyer" is who "not long ago" made this comparison, but the new version of this venerable joke which substitutes hunting a black cat for looking for a black hat, is hardly an improvement, for unless all electro-magnetic disturbances are supposed excluded from the dark room there is no absurdity in looking in it for the black cat. But this subtlety will probably only bring down fresh scorn from the anti-metaphysician.

Mr. Elliot is not so scornful as his introducer, but he is quite as confident. "The attitude maintained throughout this book is that metaphysics is a maze of sesquipedalian verbiage, beyond the reach of science to defend or to refute". Now if Bergson were merely a metaphysician, we are given to suppose, he would not be worth refuting, but he claims to be, and some dazzled and misguided enthusiasts think he is, a philosopher, and hence the need of Mr. Elliot's book. To examine this claim and strip from it the metaphysics is the author's task. This metaphysics consists of words, often, Mr. Elliot allows, eloquent and fine words, but still only words. They have no meaning and their only purpose is to give an atmosphere of incomprehensibility. Unfortunately, "the public, supposing that there must be something behind these fine words, gasp with admiration, and blindly worship the putative wisdom of the latest Delphic oracle". When "the cloud of words carrying with them no real meaning" is swept away, the barrenness and baselessness of the philosophy is revealed. Mr. Elliot has therefore given us an "exposition of the philosophy of Professor Bergson," and considering how distasteful the work must have been, and the limitations of an undisguised prejudice against metaphysics, it is most admirably done. I cannot find any serious misinterpretation or distortion, but on the contrary a very clear and able summary of the views set forth in *Creative Evolution* and *Matter and Memory*. There is, however, an omission at once strange and unfortunate. There is no account of *Time and Free-will*. The reason for the omission is quite frankly given, the work is so purely metaphysical, so devoid of all contact with actual science, that Mr. Elliot thought no good purpose would be served by burdening the reader with an account of it. Now I have no objection to this. Bergson's philosophy is not a system of neatly fitted parts, the neglect of any one of which is fatal to the harmony of the whole. But the omission gives us an important clue to what is otherwise very puzzling in so intelligent a student and acute a critic as Mr. Elliot certainly is, a clue to the reason why he finds, not erroneous merely, but arbitrary and unmeaning, so many things that are to us the very kernel of the doctrine. A few illustrations will show what I mean. On page 63 he says, "the Professor affirms that his mental state, as it advances along the road of time, swells with the duration it accumulates, like a

snowball rolling along a road and getting bigger—a conception true to nature. He then makes use of the false analogy. For 'snowball' he substitutes 'personality'; for 'snow' he substitutes 'time'; and he thinks he gets a sort of round personality rolling along getting big with time. But unfortunately it is no longer a true conception: it is mere words, meaning nothing." Now whether Bergson's theory of the true duration is true or false, it is perfectly clear that any one who could write those words could not have understood what that theory is. Once possessed of this clue the evidence accumulates that the critic does not understand this central position of the philosophy he is criticising. The theory is difficult enough, and it is disputable, but unless it is understood, unless the critic is able to see the meaning of the words, his dismissal of the words as meaningless merely reflects his own failure. It is arguable that the "illusion" of Bergson is purely verbal, but surely not in the sense that the words mean nothing. According to Bergson we conceive change by means of the changeless, movement by means of the immobile, and from this there arises the "illusion" that change is the succession of states that themselves do not change, and that movement is the successive occupation of immobile positions. Now the standpoint from which this conception is declared to be illusion is the fact that it is not true of change and movement as we directly experience these in psychical life. You may argue that the standpoint is theoretically or practically impossible, but you must understand what is meant when the scientific conception of time is described as illusion. A still more striking instance is on page 74. "The simple reader has perhaps gulped down the stream of life with some difficulty: before getting much farther he suddenly finds the word 'psychological' put in, in an entirely unobtrusive manner. The Pecten's eye not only proves a stream of life, but proves that that stream is of psychological character. . . . It is a psychological stream, all of a sudden—*and not a single shadow of fact to prove it!*" The italics are the author's. His surprise is clearly quite genuine, but it shows that he has not apprehended Bergson's theory of the nature of real duration and its distinction from the spatialised time of science. Real time is psychological. The question is not whether the theory is true but whether Mr. Elliot has really grasped its meaning. Now he could not have failed to do so if he had studied *Time and Free-will* as thoroughly as he has studied the scientific theories of *Creative Evolution* and *Matter and Memory*. In saying that the stream is psychological, Bergson is springing nothing new on the unwary reader, but simply indicating that the stream is real duration. The last chapter of *Time and Free-will*, in which a most important argument rests on the psychological nature of real time, must have been quite incomprehensible to Mr. Elliott. It may be shortly stated. Time as we conceive it and use the concept in science is a homogeneous medium. Because we so conceive it, and in so far as we can so conceive it, we can foretell the future and reconstitute the past. But time as we experience it, as we perceive it in life and consciousness, as we observe it in the formation of character, is not homogeneous but heterogeneous; there is no repetition. Could then an omniscient calculator predict from knowledge of the present state of the universe and the working of its laws, what a conscious agent will do at any particular future moment, in the same way as an astronomer will calculate the position of the heavenly bodies at any given moment? Bergson's reply is that there is no logical contradiction in the supposition but an insuperable difficulty in the operation due to the nature of real time. The character of a conscious agent is formed of real time, no moment is a simple repetition of another, to know therefore what he will do at a given moment is to know his character at that

moment, and to know his character at that moment supposes knowledge of all the circumstances that have formed it in their individual details and right up to the moment of action. To know this beforehand would be indistinguishable from being this beforehand. Neither in his account of the automaton theory nor in his discussion of determinism in his last chapter does Mr. Elliot attempt to meet or even show himself aware of the existence of this very essential Bergsonian argument against the universality of mechanistic determinism. And in the conclusion he summarises his main objection to the fundamental doctrine of the first of Bergson's three volumes in these words: "Time is a stuff both 'resistant and substantial'. Where is the specimen on which this allegation is founded?" One can only wonder whether the reader will think that it really is M. Bergson and not his critic who resembles the blind man groping in the dark room.

H. Wildon Carr.

Authority: the Function of Authority in Life and Its Relation to Legalism in Ethics and Religion. By A. v. C. P. Huizinga. Boston: Sherman, French & Co., 1911. Pp. 265. $2.25.

The author of this book, while vindicating the rights of the individual conscience as against excessive exercise of human authority, is yet of opinion that the dominant tendency of the times is to depreciate Authority quite unduly. He believes that in the Bible we have an infallible authority, a "perfect rule of faith and practice". To prove this is, I take it, the main purpose of the book.

The argument runs somewhat as follows: Faith is admitted by all to be indispensable to man if he is either to know or to do anything. It is through faith that we accept the laws of thought and all self-evident truths. It is faith that enables us to act, for if we were to wait till we could get complete knowledge we should never act at all. Now faith is simply "surrender to an acknowledged authority": whence it follows that "authority of some sort is involved in the conduct of life". "Authority means recognised, established power, witness, statement, command, etc., accepted and obeyed without any questioning." The Bible—which is One Book—claims to possess such authority; it "everywhere assumes sovereign right to authority over man—every man everywhere and always—to command belief and obedience"; it "presses upon all men the old alternative of life and death conditioned on immediate practical surrender to its requirements". In short it claims to be the *perfect* rule of faith and practice. Is it to be accepted as such? Yes. You ask, Why? The question is illegitimate, for if reason could sit in judgment on the claims of the Bible, the Bible could not be authoritative. The believer first grants its authority: that renders it authoritative for him and enables him to feel its authority. He must not make any distinction between one part of the Bible and another in respect of authority, because that is to claim to judge his authority. 'The Bible says, therefore God says,' is the maxim he must adopt. The hardened sceptic must do even as the believer. *Debet credere ut intelligat.* It is true that is begging the question, but in the nature of the case that cannot be helped. For the would-be believer there is in order [*sic*] the confession, 'Lord, I believe, help thou mine unbelief'. Further, though the authority of the Bible cannot be established at the bar of reason, it can be vindicated there.

(1) The most obvious criticism of this argument is that the Bible is not,

properly speaking, one book, and so cannot make any claims for itself. Nor does any of its many authors make any claim for it. Mr. Huizinga cites Revelation xxii. 18 f. in refutation of the statement, "The Bible is not a voucher but a preacher". But there "the book" is of course the Apocalypse itself, not the whole Bible. And can any one accept the assertion there made "at its face value"? Any one who does must find the critical apparatus of the Apocalypse grim reading. (Nestle's critical note *ad loc.* runs: 18 – επ αυτον A* | τας: +επτα Qa 19 – εκ Aa.) In 2 Tim. iii. 16 (to which, however, Mr. Huizinga does not appeal in this connexion) it requires, if Paul is the writer, a very arbitrary exegesis to make πᾶσα γραφὴ (θεόπνευστος) mean the Bible.[1] If, on the other hand, Paul is not the writer, *cadit quaestio.*

(2) It is irrational to accept the Bible as an infallible authority without any questioning. Mr. Huizinga, by means of an analogy from the acceptance of the laws of thought and of self-evident truths, seeks to show that the procedure is perfectly rational. "Reason," he says, "functions in the giving of assent to Authority" and Authority, though to be accepted without any questioning or examination (*cf.* p. 167), is not to be believed blindly or at command (p. 115). It is in this way, he holds, that we accept the original data of reason and all self-evident propositions. *Reason* accepts them, but *by faith* and not on her own authority. This is of course a common, but surely an erroneous, view. The laws of thought are necessarily, not voluntarily, "accepted" by Reason. They are presuppositions of all reasoning and simply cannot be questioned, because any inquiry into their validity necessarily presupposes their validity. Nor are self-evident propositions which are not presuppositions of all reasoning accepted through faith. We just apprehend that they must be true, and this apprehension of necessity is not an exercise of faith, but of reason at its purest.

(3) Even if "the primordial verdicts of conscience and reason" were, as Mr. Huizinga believes them to be, assumptions, it would not follow that the Bible could be accepted in the same way as they. The Bible is not a proposition and cannot be reduced to one. There is no semblance of rationality about accepting the Bible 'on its own authority' as infallible, and it may be doubted whether any one ever has so accepted it. The question, Why in particular the Bible? *is* legitimate, and that means that the theory of biblical infallibility must be examined in the same way as any other theory.

(4) Mr. Huizinga maintains that the infallibility of the Bible can be vindicated at the bar of reason. It would be interesting to know on what rational grounds he could disprove a contradiction between Matthew and Luke as to the order of the temptations of Christ.

The book seems to have been put together rather hastily. One indication, among many, of this is the repetition on pages 55-56 of some dozen lines from pages 50-51. (As the repetition is not quite exact, it seems improbable that it is due to a compositor's error.) The arguments are not well marshalled, and the connexion of one paragraph with another is often hard to find. The style is throughout very bad, and however careless a man may be about his own style, he should not father a split infinitive on the English Bible (*cf.* p. 211).

W. L. Lorimer.

[1] Apropos of the words ὡς ἐξουσίαν ἔχων in Matt. vii. 29, Mr. Huizinga explains ἐξουσία as = out of (His) being!

Theodicy: Essays on Divine Providence. Three vols. By ANTONIO ROSMINI SERBATI. London: Longmans, Green & Co., 1912. Pp., Vol. I., xvii, 475; Vol. II., vii, 456; Vol. III., 102. Price 21s. net.

The appearance of Rosmini's *Teodicea*, as a three-volumed work in English, deserves a hearty welcome. Rosmini is still too little known. His work on *The Origin of Ideas* was presented in an English dress years ago. The same is true of his *Psychology*. The Compendium of Rosmini's philosophy by Davidson is, in many respects, a useful work, which its gifted author could have made better with more time and patience. A less-known work is the translation of some of Rosmini's moral and religious Discourses, which appeared in 1882. Besides all which, there is the interesting *Life of Rosmini*, by G. S. Macwalter, which was issued in 1883, and was followed by that of W. Lockhart in 1886. But the *Theodicy* awaited translation at the hands of the late Father Fortunatus Signini, to whose patient labours the present version is mainly due. The few philosophical scholars who have long been familiar with Rosmini's *Teodicea* can have no doubt that this long-deferred honour was well bestowed upon *il suo volume*. Rosmini had a keen, sharp, critical faculty; and he always saw things, philosophically, with his own eyes. Rosmini's influence has been deep and diversified; not a few Italian thinkers were lifted by his works out of religious scepticism. As the greatest Italian thinker of his time, he left deep imprint on the history of philosophy; and the roots of the Modernist movement in Italy run back to the work of Rosmini and Gioberti, as leaders of the Catholic Reformist party in the middle of the nineteenth century. The notable Italian novelist, Fogazzaro, who recently passed away, did not escape being more influenced by the philosopher of Stresa —the firm friend of Manzoni—than by any other thinker.

The first and second volumes of the work before us are made up of Essays on Divine Providence, the third volume consists of Appendix and Index. The first volume contains Book I., which is logical, being concerned with the want of logical cognitions; Book II., which is physical, as taken up with the want of physical cognitions; and Book III., which is hyper-physical, as dealing with the lack of theological cognitions, and this Book runs into and through the second volume. It seems to me that this work, taken in whole, is not so expressive of the powers of Rosmini as a philosopher as certain of his other works, but it is declaratory of his skill and attitude as a *religious* philosopher. It is less striking, I think, in respect of its argumentation, than of its witness to the spiritual strength and elevation of its author. Rosmini locates the difficulties of Divine Providence, for us, in the limitations of human thought or reason, and has much to say of the relations of faith and reason. He does not think natural reason a sufficient guide, but looks on reason as leading man to the need of faith, which faith, in its turn, leads him back to reason; and reason, thus encouraged and supported by faith, becomes in the end an infallible guide. My only objection is, that Rosmini seems to deal with the need of faith to reason, but, like so many writers of our own time, does not show—as I think so desirable—how faith may, and should, have, at every step and stage, the warrant of reason. It was well, however, for Rosmini's time to have had the interactions of faith and reason brought out so far as he has done. He has the old fault of being apt to glide from faith into "the deposit of faith," without the distinction necessary. He contends, however, for harmony and conformity as existing between reason and faith, and for the first principles of reason as free from error, since to overthrow or discard them would mean the self-destruction of reason.

There is some interesting criticism of Locke, Condillac, Hume, Berkeley, Pascal, and Kant, in this connexion, the sheer subjectivity of the last-named thinker rousing his particular antagonism. It should be noted that Rosmini follows the lead of Aquinas, whom he terms "the prince of Italian philosophers" (Vol. I., p. 153). Rosmini does not conceive the human mind as restricted or limited, when he treats of the limitations of human reason; but the form of the mind, "unlimited in itself, is found in a limited nature" (*ibid.*, p. 157), to which the Infinite cannot be presented. At the end of Book I. he has come to the conclusion that Theodicy has been destroyed by modern philosophy, by which he means Hume and Kant. Philosophy has made too many advances since Rosmini's time for many things here, both in form and content, to make full appeal to us to-day, but it is useful and important to have his presentation, which has still its own value, made accessible to all.

The second Book deals with Divine Providence in relation to the distribution of good and evil, and was meant to counteract the influence of Romagnosi's objections. Rosmini takes the possibility of evil to be inherent in finite natures, and seeks to prove that the spiritual good now opened for man far outweighs the evil. There is some passing criticism of the system proposed by Pope, Shaftesbury, and Bolingbroke, for the vindication of Providence. Rosmini's whole discussion in this Book is conducted with vigour, loftiness of spirit, and a complete absence of the aridity which often marks the treatment of abstractionism in such matters.

Book the third is occupied with the law of the Least Means applied to Providence. After dealing with "other and more subtle" objections, Rosmini proceeds to discuss some questions of Ontology, falling back upon the great principle of universal and indeterminate Ideal Being, which was fundamental in Rosmini's philosophy. Ideal being exists, for him, only in the real; and real being is three-fold, the simply real, the intellectual real, and the intellectual moral. Rosmini makes less of spontaneity than some present-day philosophers, for he sharply distinguishes spontaneous from moral action. After consideration of the laws of Virtue and Wisdom, he discusses the law of Parsimony or the law of the Least Means in the universe, the law of excluded Superfluity, the law of the Permission of Evil, the law of unity in God's action, and various other laws. Among philosophers whose positions are noticed in the discussion—which always carries a certain interest, though there is some tendency to diffuseness—are Leibniz, Ferrari, Euler, and others.

In taking leave of Rosmini's *Theodicy*, a substantial part of his great attempt at the restoration of Christian philosophy, I will only say that, though greater drawbacks attach to his work than I have sought to lay out in detail, yet the lasting merit belongs to Rosmini to be no mere discursive reasoner, but a possessor of the peerless gift of insight—both speculative and spiritual.

JAMES LINDSAY.

English Thought for English Thinkers. By ST. GEORGE STOCK. Constable & Co. Pp. xx, 206.

In this volume, Mr. Stock considers the writings of the three great British philosophers—Locke, Berkeley and Hume. The book, as was to be expected from its author, is written in a lucid and pleasing style, and it contains much careful exposition and some effective criticism. It was worth writing, therefore, and is worth reading. On the other hand it is

not free from inaccuracy and, to my judgment at least, the constructive part of the criticism is of very doubtful value.

As the latter question is partly one of opinion, I shall try to allow the reader to judge for himself. Mr. Stock, as a critic, adopts the standpoint of common sense. To this all honour. But if common sense is relevant to philosophy it must at least be critical common sense, and it must be able to grasp the force of opposing arguments. Let us see how Mr. Stock fulfils these requirements. "Now let us recapitulate our creed and see what it amounts to. To believe in our minds is to believe in a subject; to believe in other minds is to believe in an eject; to believe in space and time is—well, to believe in space and time; to believe in bodies, or, putting the same thing in a more abstract form, in matter, is to believe in an object. Every one of these beliefs was assailed by Hume's scepticism; every one of these beliefs we hold with as much vigour and tenacity as if Hume had never written." Vigour and tenacity, I suppose, are better than knowledge, but, if so, why begin to philosophise? Nor is this passage isolated. "In the notion of self," says the same chapter, "we have the sole *presented* type of substance, a something that continues unchanged under a change of accidents" (italics mine). This is surely an interesting and curious presentation. It is presented, one gathers, both in sleep and waking, and we are asked to believe that this desiccated and, to most of us, non-existent fragment is what the plain man means by himself.

Space, according to Mr. Stock, is more real than bodies because he can conceive space (apparently in the sense of imagining it) without bodies, but he cannot 'conceive' the non-existence of space. The principal reason why time 'belongs eminently to the domain of common sense' is that we find we have nothing to say if we are asked to explain it and want to do so. "Common sense" also "declares that colours exist in bodies and bodies exist in space. . . . It is not the business of science to deny the facts of experience, but to explain them. Experience tells us that colours are in bodies; let science inform us how they come to be there." Thy subtlety, O shade of Philonous, is scornfully rejected by this modern Hylas.

This is enough, I think, to allow the reader to form his own opinion. It is only fair to add that the critic's own standpoint is not obtruded in his running commentary, which is neither dogmatic nor unappreciative.

On the second head, that of inaccuracy, I do not wish to give the impression that the book is inaccurate on the whole. On the contrary it is usually accurate. To justify the criticism, however, I must cite instances and the three which I shall choose occur in close succession, and refer, respectively, to different authors in the British triad.

Page 123: "There are two weak points in Berkeley's system—

"1. His confining reality to sense.

"2. The precarious nature of the existence that he allowed to spirit."

These statements are inconsistent, and the first, at least, is false.

Page 124: Locke 'left the idea of spiritual substance intact and contented himself with calling that of material substance obscure'. This is a serious error. Locke's position is that the notions of spiritual and material substance are equally obscure (*Essay* II., xxiii., 5). He maintains also (II., xxvii., 10) that the question of immaterial substance 'matters not at all' with respect to personal identity. The well-known argument in IV., iii., 6, should also be remembered, *viz.*, that God may superadd thought to matter, and, therefore, that the substance of matter may also be the substance of mind.

Page 124: 'With Hume ideas of reflection were dislodged from the place of honour which had hitherto been allowed to them'. Is this in-

tended to deny the importance of the treatment of the passions? Moreover, had Mr. Stock noticed (as he did not in his account of Hume's treatment of causation) that the impression from which the idea of necessary connexion is derived is an impression of reflection, he might have expressed himself in a more guarded manner.

J. Laird.

The Elements of Morals. By Ambika Charan Mitra, M.A., Calcutta: S. K. Lahiri & Co. Pp. xv, 859.

The fact that several useful text-books of Ethics already exist is not by itself a good reason against the appearance of another. It may be doubted whether Mr. Mitra's book ought to supersede any of them, but it has some good qualities. It is generally thorough and well arranged. It includes a good deal in its 800 pages, and, in the majority of cases, the historical disquisitions are reasonably accurate. The quotations intended to illustrate various points frequently succeed in doing so. These merits are considerable, but they do not suffice to make the book really first-rate.

In the matter of quotations, for instance, the author has more than the usual defects of his qualities. Some, as I have implied, are apt and not too commonplace. But there are far too many of them and frequently they seem to be introduced merely for the sake of quoting something. There is no excuse for introducing a quotation which is itself second-hand, yet Calderwood is quoted (p. 54) for a simple statement of the 'Dubito ergo sum'. Indeed, one is sometimes led to the uncharitable supposition that the author is afraid to pronounce *in propria persona* on very obvious points. In the first chapter (which, perhaps, somewhat exaggerates this tendency) there are eighteen quotations covering, as nearly as I can judge, six out of the seventeen pages. No one of these quotations is drawn from writings other than philosophical, and twelve of them are quoted from text-books in common use. About a quarter of the book stands within inverted commas, not to mention those passages whose sole function is to explain the theories of others. And, to continue the arithmetic, is not sixty-three quotations from Martineau and nineteen from Calderwood's *Moral Philosophy* rather an excessive number?

Again, the author appears to me to have swelled the volume of the book unduly by the inclusion of matter which, according to his own definition, is irrelevant. Though well aware that Ethics is a normative science, he declares in an unfortunate phrase (p. 50) that 'ethical inquiry may be subdivided into two main branches, the psychology and the metaphysics of ethics. . . . The present work is confined to the psychology of Ethics.' But if the door be bolted and barred against metaphysics why include a dozen closely printed pages on Hegel's dialectic or give an account of Spinoza's ethics which summarises the argument of the whole of that work? And why compare Hegelianism, Vedantism, and Spinozism on points which are nothing if not metaphysical?

As a critic, Mr. Mitra shows an unfortunate desire to eat his cake and also to have it. I shall confine myself to one instance out of several. He has many hard words to say on the subject of Kant's rigorism. He deplores especially that on Kant's view 'progress in the moral sphere would tend to detract from the moral worth of acts' (p. 239). But what is Mr. Mitra's own account of duty and obligation? Any case of the actual performance of duty, he maintains, implies an actual (and not merely a potential) conflict between the 'higher and lower self,' between

the 'rational and irrational parts of our nature'. A saint, so far as he really is saintly, is above duty altogether, although duty is the essence of ethics. He is saved from being above morality, only because he is permitted to know what duty is, although he cannot perform it. And speaking of the merit of actions, Mr. Mitra says (p. 599): 'The greater the strain on will, the greater the merit. . . . Thus merit declines as virtue increases!'

J. Laird.

Liverpool Addresses on Ethics of Social Work. By John MacCunn, M.A., LL.D. Liverpool University Press. Pp. 195. Price 4s. 6d.

"The philosopher," writes Dr. MacCunn, "—the ethical philosopher at any rate—has a weakness. It is a secret longing to preach." If it is a weakness it is one which finds its counterpart in a secret longing on the part of the world in general to be preached at, always provided that the sermon is relevant and carries conviction. We can no more help welcoming the preacher who can throw light on the problems of our daily life than we can help welcoming the sun or wind which disperses a fog through which we are groping our way in semi-darkness. The particular department of life to which these addresses are directed is that of social work, including our relations with our fellow citizens, and the proof of their value may be found in the steady illumination with which they touch one after another of the problems which meet us all in proportion as we partake of the citizen life.

One of these problems which is apt to haunt more especially those who follow the more difficult paths of philanthropy is that of the value of the lives they are striving to aid. "One has only to pass in melancholy review the incurably diseased, the insane, the vicious, the paupers, the criminals, and then to put the question if the pitiful and patient care and tendance of these social failures can be justified as making the nation strong." Or, some of us may ask ourselves, can it be justified as absorbing the strength and powers which seem so often wasted in their efforts? It is one thing to love humanity in general; it is another and very much more difficult matter to love it, or to do anything less than hate it in its most degraded forms when we are brought face to face with them. The way which shines clearly enough before us when we are impelled by sympathy with misfortune, leaves us groping and uncertain when confronted with vice and selfishness; and it is then that we need such help as may be found in the addresses "Motives to Social Work" and "Justification of Motives".

But perhaps where the author shows himself most helpful at the present juncture is in his strong and sane belief in the democracy. The addresses on Democratic Education and Local Patriotism and Education witness how fully he understands both the dangers and the promise of democracy. His rebuke to the pride of intellect and the conceit of culture, which cannot understand the strength and soundness of a life which does not conform to their ideals, is as just and timely as his warning to the Democracy against thinking that majorities can solve its social problems without the aid of expert knowledge.

Helen Bosanquet.

Exposition and Illustration in Teaching. By Prof. John Adams. London: Macmillan & Co. Pp. 426.

Prof. Adams has proved himself both as a teacher and a writer to be a past master of the arts of Exposition and Illustration, and this book

upon an important aspect of the teaching process is worthy of the writer's reputation.

Setting out with a clear statement of the nature and scope of his subject, the author in consecutive chapters leads up to a practical treatment of Exposition and Illustration by discussing Mental Content, Mental Activity, Mental Backgrounds, and the Conditions of Presentation. He shows that there must be a double process of analysis before a beginning can be made. First the teacher must review his own mental content so as to discover which elements are of importance for the present purpose, next we have an analysis of the pupil's mental content in relation to the matter about to be presented to him.

In deciding upon the order of presentation both the logical and the psychological sequences have to be considered. "For the teacher the logical sequence of the facts to be dealt with is the beginning of the process of Exposition; for the pupil it is the end." The problem of Exposition is complicated when the teacher is dealing not with the individual mind but with a class. "In dealing with a particular mind, we may approach it on one particular side because we know that to be the most accessible. The visual and the audile would be approached in a different way; but with a class we have to make an appeal that will meet all needs."

From page 225 to the end of the volume we find a series of valuable chapters, which should prove of real service to all classes of teachers and lecturers. "Exemplification and analogy," "the story as illustration," "material illustrations," "the picture as illustration," "the diagram" are the subjects discussed, and the problems dealt with are of frequent occurrence in all teaching experience. They are treated with that combination of wit, insight, and practical wisdom which few writers are so richly endowed with as Prof. Adams.

Illustration is shown to be a branch of Exposition. Both processes deal with the new and the old. Illustration is a work of arrangement rather than of addition. Its function is to stimulate. "It may be used not only when the deductive method is being employed, but also in an inductive way. In the latter case the illustrandum does not appear till the process is completed, but it has been in the teacher's mind throughout." The chapter on the dangers of illustration which brings the volume to a close is worth serious study. It gets to the root of several very common faults in teaching.

The style of this book is so clear, the treatment so masterly, the illustrations are so fresh and witty, that it has been a pleasure to read it.

JOHN EDGAR.

Involution. By Lord ERNEST HAMILTON. Hills & Boon. Pp. 384.

Lord Ernest Hamilton's professed object is much the same as that of Matthew Arnold in his theological writings, to exhibit the permanently valuable features of Christianity, disentangled from the superfluous accretions of centuries of "dogma" and "superstition". Unfortunately, he carries out his programme in a spirit of wholly unjustified fury against all theologians, priests and ministers, whom he seems to regard in the mass as simply deliberate teachers of that which they do not themselves believe. He has not yet learned that "iconoclastic" attacks are rarely successful unless they are accompanied by a sympathetic insight into the state of mind of those against whom they are directed. Unfortunately also, though he gives his opinions on matters of history and criticism with a singularly "dogmatic" air of finality for so violent an opponent of

"dogmas," many of them are such as to make one doubt whether he has studied his subject very seriously. Historical Christianity is hardly likely to suffer much from the denunciations of a critic who asserts, without any proof, that the writer of the *Acts* had never heard of the Virgin Birth (p. 22), or that the only "early fathers" who showed any intellectual powers were 'Paul, Jerome, Origen, and possibly Justin Martyr' (p. 27). What, one asks, of Clement, Augustine, Basil and the Gregories? How can one attach importance to a man's opinion on the historical facts of early Christianity when one finds him, again without giving any reason for so strange a view, treating Tatian, Marcion and Basilides (!) as better authorities than any of the canonical writers (p. 28), or saying that the doctrine of Atonement was "invented" (p. 32) by Augustine. (It had previously, on p. 22, been declared to be a "tactical move" devised by St. Paul, but that is no matter.) Indeed, I doubt if the author has ever even read with care the canonical books of which he has such hard things to say. He tells us on page 70 that it is the "invariable rule" in the Old Testament that the king who does "right in the sight of the Lord" is successful in all his campaigns; yet Josiah, who is recorded to have done right as none of his fathers had done, was "slain at Megiddo" by Necho (2 Kings xxiii. 30); he supposes that Babylon "joined Niniveh beneath the sand" in the reign of Darius I., though he need have gone no farther than the Book of Ezra to discover that it was a royal residence in the reign of Artaxerxes I., as, of course, it remained for many centuries afterwards; he asserts that the earliest Christians knew of no miracles worked by their Master (p. 83), and at the same time that the second Gospel contains the recollections of, and was possibly dictated by, one of the foremost of these early Christians, St. Peter (p. 110). Of St. Paul, we learn that in his Christianity there was no Messiah (p. 98)—and the expression "*Christ* Jesus," as we know, occurs on almost every page of his Epistles; that he did not connect Christ with the Passover and its lamb—and yet we know who wrote, "Christ, our passover, is sacrificed for us". Really, criticism of this kind is simply not respectable.

A. E. Taylor.

Early American Philosophers. Lectures on Moral Philosophy. By John Witherspoon. Edited by V. L. Collins. Princeton University Press. Pp. xxix, 144.

This is the first of a projected series of reprints from the works of early American philosophers, appearing under the auspices of the American Philosophical Association. John Witherspoon, whose treatise is thus reprinted, was President of Princeton University from 1768 to 1794 and the book, accordingly, is published by the Princeton University Press. From the interesting historical introduction we learn that he spent a busy ecclesiastical career in Scotland before his departure for America, and a busy political as well as educational career during the later part of his life. Though born a Scotsman, he became a staunch American.

No exalted claim is made for the value of the books in this series: 'Much of this thinking is at least respectable, and some of it significant and important'. Dr. Witherspoon's work is not more than respectable. As here published it is only a series of synopses of lecture notes. The President wrote clearly, but his speculative powers belong neither to the first rank, nor to the second, nor to the third. In metaphysics he belonged to the school of common sense, and he seems to have thought

Beattie as good a philosopher as Reid. That was also the opinion of George the Third and further comment is needless.

Dr. Witherspoon's ethical theory is that of the later intuitionism. Like Price he seeks to base ethics on reason but he maintains that moral sense plays a real though subordinate part. His horizon is bounded by the English writings of the eighteenth century, but he is far inferior to Price or Reid. He displays considerable shrewdness in attempting to steer a middle course between the warring factions. But his arguments on particular topics are often flimsy. The denial of any instance of the legitimate subordination of veracity to other ends, the doctrine that monogamy is right because of the approximate equality of the sexes, the assertion that a man, by living in a state, consents to its government, are instances in point. Nor is the accuracy of his references to opponents or his powers of classification in much better case. It is simply false to say that Hume derided the duty of justice or ridiculed chastity. And what is the value of saying that to be either at peace or at war is the natural state of man, while being either married or unmarried is an adventitious condition?

While the book has been carefully edited it is impossible to praise the editor's methods. On the numerous occasions where the manuscript makes sense and the printed editions (probably following one another) do not, he elects to follow the readings of the printed editions and says they are wrong in a footnote.

J. Laird.

Psychology Without a Soul: A Criticism. By Hubert Gruender, S.J. St. Louis, Mo., and London: B. Herder. Pp. xviii, 245.

Readers who believe that souls have returned into fashion—and other readers also—will welcome the attempt to revive the scholastic conception of soul. Father Gruender is determined to be nothing if not logical: he argues clearly and incisively: he makes his points against modern psychology like an opposing counsel, and heads his paragraphs with thick-type summaries after the manner of a newspaper poster. The reader, if he is wise, must be prepared to honour large drafts on 'common sense,' to shun the 'abyss of idealism': and he will condone, although he must still deplore, cheap witticisms like 'Kant-phrases (now preferably spelled with "c").'

Father Gruender's thesis is very simple. The existence of the soul is self-evident: its simplicity and spirituality are demonstrable: and every other psychology is a kind of materialism, 'hard' or 'soft'. Thoughts exist and either require a support (as a matter of intellectual necessity) or they do not. If they do, *cadit questio:* if they do not, they themselves are substances. But even if we admit this argument, the author clearly commits a fallacy when he invites us to believe that thoughts cannot be substances because they *do not exist* by themselves. Nor is his 'demonstration' more convincing. The simplicity of the soul is proved 'by the fact that we perceive our abiding personal identity throughout our ever-changing experiences.' Clearly, if 'perception' be used strictly, this supposed fact is not a fact at all. Even if such a perceptible identical core did exist it would be far less than we mean by soul and far less important. The proof of the spirituality of soul is, negatively, that only sensation (not thought) has its corresponding brain tracts and, positively, that reason is 'essentially superior to sense'. The negative part of the thesis is tenable but can hardly be proved: and the author's argument is vitiated throughout by the presupposition that causal influence involves identity of nature. It would be interesting to know whether he accepts an obvious corollary,

viz., that so far as reason enters into free choice it can have no influence whatever upon bodily behaviour. This same presupposition, it would appear, causes the author to label all his opponents 'materialists'.

But the book is vigorous, well-informed and interesting.

J. Laird.

Diseases of the Nervous System. By Judson S. Bury, M.D. Lond., F.R.C.P., B.Sc., Vict. Senior Physician to the Manchester Royal Infirmary, Professor of Clinical Medicine in the University of Manchester. Manchester: At the University Press, 1912. Pp. xx, 778. Price 15s.

This is essentially a medical volume. The descriptions of the nervous elements are proportioned to the primary purpose of furnishing the student with a sufficient basis for diagnosis. "In teaching," says Dr. Bury, "I have always avoided the use of the terms *organic* and *functional*, and these words rarely occur in this book." This is an important innovation in such a volume. The distinction never had much foundation in anything but inadequacy of diagnostic methods, yet it is to be found all through medical books as if it meant something other than a provisional arrest of investigation. Curiously, however, the same type of idea creeps into the short paragraphs on "heredity" as a factor in the causation of nervous disease, *e.g.*, in the words "transmission of defective vitality" and "strong tendency to tuberculous disease". If these be not of the same order of idea as "functional," it is difficult to know where they belong. This is, however, merely a verbal fault, if fault it be. The method of the book is to give the student a groundwork of sound anatomical ideas. The illustrations are very numerous and well selected.

The volume, which is No. lxvi of the excellent Manchester University publications, covers the whole ground of nervous disease, and, to judge by some of the leading expositions, should form a sound and adequate text-book for students, whether they be undergraduates or post-graduates.

W. L. M.

Critique of Pure Kant, or a Real Realism vs. a Fictitious Idealism, in a word The Bubble and Monstrosity of the Kantian Metaphysic. By Charles Kirkland Wheeler. Boston: The Arakelyan Press, 1911. Pp. 298.

This book is perhaps worthy of the attention of modern realists as an example they can imitate but hardly surpass. The pleasing portrait of a mild old gentleman which forms the frontispiece is, however, no clue to what follows. Words fail the author at the very beginning of the Preface. "It is proposed in this polemic to show up the bubble and monstrosity of the Kantian metaphysic; its utter absurdity, its utter silliness, its utter—well, what stronger terms shall I use?" We can suggest none, but should be grateful to him for a few words on the subject of Hegel. Strangely enough, he himself does not expect to be properly understood just yet; he calls his book 'Hundredth Century Philosophy' and dedicates it to "the doctrine of our Oneness with the One". Perhaps, when that century arrives, he will be appreciated as he deserves, if his paper lasts so long: meanwhile it is good to know that philosophy can still stir such emotions in the somewhat anæmic 'hub of the universe'.

Aristote: La Métaphysique, Livre 1er: Traduction et Commentaire. Par GASTON COLLE. *Aristote: Traductions et Études*, Collection publiée par l'Institut Supérieur de Philosophie de l'Université de Louvain. Louvain and Paris, 1912. Pp. 38, 171.

If one may judge from its opening volume, the series of Aristotelian translations with commentaries projected by the University of Louvain should prove highly interesting to students of philosophy. Mr. Colle's version of the first book of the *Metaphysics* is, so far as I have tested it, usually accurate and elegant. One or twice he seems to me to miss the exact force of a word, as *e.g.*, when he renders the words Ξενοφάνης δὲ πρῶτον τούτων ἐνίσας at 986, *b* 21, by *quant à Xenophane lequel fit l'être un . . .* ἐνίζειν can hardly mean to "make one of" a thing. Rather as μηδίζειν means "to go in for the cause of the Medes," so ἐνίζειν means "to take the side of unity," and the phrase is not unlikely to be a conscious reminiscence of Plato's στασιῶται τοῦ ὅλου, just as "theist" means not "one who makes a god," but "one who goes in for a god," a "Goddite," as one might put it in the slang of the streets. So it is a slip to translate ἐκεῖ, when used in a quasi-technical sense of the Platonic τόπος νοητός, by *là-bas* (990, *b* 36); it should rather be *là-haut*. In general, if I had to pass a criticism on Mr. Colle's version, it would be that he has taken Christ's text, and consequently, of course, Christ's theories of the relative worth of our MSS., a little too much for granted. Occasionally I find him objecting to interpretations as "departing from the text," when they merely depart from the text *as constituted* by Christ.

The commentary is specially interesting because the author is at home, as one would expect, not only with the views of modern editors and expositors, such as Bonitz, Schewegler, Robin and Gomperz, but also with those of St. Thomas and the other great mediæval Aristotelians. I should call his exposition an excellent example of Thomist interpretation modified by the results of modern research. I am not surprised that, as a Thomist, M. Colle should see the three philosophies to which Aristotle is systematically unjust, Eleaticism, Pythagoreanism, and Platonism, through Aristotle's eyes. His commentary on the chapters in which Aristotle disposes of the line of thought which begins with Pythagoras and culminates in Plato, is an admirable piece of work, so long as you admit that Aristotle's version of the principles of the "mathematical philosophers" is a correct one. This is more than I, for one, could allow. I cannot forget that the polemic against Plato turns largely on a mere confusion of the ἀόριστος δυὰς of the "great-and-small" (the Variable, as we should say) with the αὐτοδυάς, *i.e.*, the *number* 2. On grounds of this kind, Aristotle's "refutation" of Plato seems to me superficial and fallacious. In fact, any philosophy of number which begins with the assumption that numbers are properties of sensible things appears to me, in the light of modern mathematics, barbarous. But it is eminently useful to have the accredited Aristotelian doctrine put before one so forcibly as it is put by Mr. Colle, whether one accepts it or not. Only I could wish that the author had known enough of modern work to understand how seriously the theory has been discredited, as I also wish he had studied *e.g.* Prof. Burnet's *Early Greek Philosophy* before making some rather rash assertions about the dates of the philosophers, and that he had gone more to the actual texts, especially in the all-important case of Parmenides, than to misleading doxographical traditions.

A. E. T.

Annales de L'Institut Supérieur de Philosophie (Université de Louvain). Tome 1. Année 1912. Louvain and Paris. Pp. vii, 705.

Our space will hardly admit of more than a line of welcome to this new annual, which bears eloquent testimony both to the vitality of Thomism as a distinctive type of philosophy, and to the position and wide range of interests of the Philosophical School of Louvain. Of the nine contributions, most of which are of considerable scope, two belong to Experimental Psychology, that of MM. Michotte and Ransy reporting and analysing a series of experiments devised to throw light on "logical memory," (the method adopted being to exhibit pairs of terms, and to call on the subject to name a relation between them, specifying as carefully as possible any intermediaries which contributed to its recognition), and that of M. Michotte on recent researches on the apparent simultaneity of periodically recurrent disparate impressions. M. Jacquart contributes an elaborate study of the statistics of crime in Belgium from 1868 to 1909, M. Lottin, a monograph on Quetelet, and M. Mansion, a learned examination of the Aristotelian concept of Nature. M. Balthazar, in an essay on St. Anselm's famous proof of the existence of God and the treatment of it by St. Thomas, arrives at the conclusion that the Anselmian argument is absolutely vitiated, as has usually been held, by what he calls its "idealism," *i.e.*, its unjustified transition from the presence of the concept of God *in intellectu* to the existence of a corresponding object *extra mentem*—and that certain recent attempts to show that St. Thomas's criticisms are aimed only at current misunderstandings of Anselm's reasoning are unjustified. Perhaps the most suggestive sentence in the essay is the following: "We only tend towards God, we only seek in Him our ultimate end, *because we know* that God is necessary for an adequate explanation of the world of experience.' This is, no doubt, the Thomist position, but it would be an interesting question whether it is not also a neat formulation of the central error of an exaggerated "intellectualism". M. Nève, writing on "Pragmatism and the Philosophy of Bergson," answers the question whether Bergson is a "pragmatist" by saying that he is not only a pragmatist, but the only pragmatist who has given to the current "pragmatic" tendencies a coherent expression of which "intellectualism" is bound to take serious account. M. Lemaire's essay on "The Value of Scientific Experiment" deals with the utterances of Duhem, Le Roy, and Poincaré (among others). In the main, the views of Poincaré are sustained. The object of the essay is to protest against the tendency to break down the distinction between "fact" and "theory," by regarding the so-called "scientific fact" as a highly arbitrary "substitute" for the "fact" of actual experience. The author's point is that, in the last resort, the "facts" of experience are "given" not "made," and that the "law" is given in and with the facts which it connects.

A. E. Taylor.

La Théorie de l'Homme et de la Civilisation. Par Erasme de Majewski. Paris: Librairie H. Le Soudier, 1911. 8vo. Pp. 351. 8 francs.

This is the second part of a projected trilogy, the first part having appeared some three years ago under the title of *La Science de la Civilisation*, and being already in its second edition. The author, who is a Pole, belongs to that large class of sociologists, represented in this country by few thinkers of eminence other than Spencer, who, proceeding on strictly deterministic principles, seek to assign to society its exact place amongst

biological phenomena. He distinguishes, as contrasted with the non-living matter, three forms of life, the cell, the organism, and society. In his peculiar terminology, they represent so many different 'realities,' the organism being named 'reality C' and society 'reality D'. So far as his object is simply to affirm that intersubjective experience, no less than subjective experience, is a fact, and moreover a fact in some sense *sui generis*, he is perhaps not strikingly original. But he has a further truth to announce which, he is convinced, will revolutionise sociological science. This is to the effect that—once more to make use of his novel vocabulary—the "*inter-mens*," which is the essence of 'reality D,' that is, society, is a "*parler-mens*". Speech, he maintains, in and by itself, converts what would otherwise be a mere animal into a specifically social being. Man, *qua* man, is the product of the social thought which forms the psychical side of the civilisation to which he belongs; whilst the corresponding physical side is speech. In developing this doctrine of the relation of thought and speech, and their joint effect in raising the individual consciousness as it were to a higher power, the author does not adduce empirical proofs, psychological or anthropological, after the manner dear to the Anglo-Saxon mind, but relies rather on a dialectical method of producing conviction. It is to be noted that he identifies a civilisation with the group of those who speak the same language, so that Great Britain and the United States or Portugal and Brazil are, we suppose, really one society. Meanwhile, 'humanity' is left rather out in the cold, since the possibilities of Esperanto do not appeal to our author. Why not, however, set up humanity as 'reality E' with some other type of social bond, say, telepathy?

M.

Traité de l'Enchaînement des Idées Fondamentales dans les Sciences et dans l'Histoire. A. Cournot. Nouvelle édition. Paris: Hachette et Cie, 1911. Pp. xviii, 712.

Like most of the works of Cournot, this important treatise on the concepts and methods of knowledge, when first published in 1861, 'fell still-born from the press'. Its thorough and patient criticism was altogether opposed in spirit to the facile eclecticism of the official philosophical circles of the Third Empire, if indeed one can speak of "philosophy" at all in connexion with what was for the most part no better than the rhetorical elaboration of trivial ideas. French philosophy has, however, now taken a new lease of life, and it is not remarkable that there should be a distinct demand for reprints of Cournot's chief works, which have become exceedingly rare in the original editions. Hence M. Lévy-Bruhl, who furnishes a brief Introduction to the present volume, confidently predicts that our own age, which seems to be specially interested in philosophy as the criticism of science and her methods, will give the neglected philosopher the recognition which was never his lot in life. Detailed discussion of a reprinted work which, of course, starts from the level of the sciences as they were half a century ago, would be out of place here, but I cannot abstain from calling attention to the historical interest of the first "book" of the work, in connexion with the later developments of the philosophy of the Mathematics. We see in Cournot's treatment of the subject the demand for the recognition of "order" as the supreme concept of mathematical thought which has borne such fruit in our own generation, but he has not as yet the instruments needed to develop his central concept fully, an adequate symbolic logic, and an adequate treatment of the problem of the transfinite, and hence is con-

stantly being compelled to stop short of his goal when almost in reach of it. (*E.g.* he is still troubled by the unfortunate Leibnitian view of the "infinitesimal" as the basis of the Calculus.) Bolzano was perhaps the one man who, more than any other, might have helped him in the right direction, but in all probability he had not so much as heard Bolzano's name.

A. E. T.

Aristoteles Über die Seele, neu übersetzt. Von Dr. ADOLF BUSSE. Leipzic: Felix Meiner, 1911. Pp. xx. 121. Price, M. 2.20.

This is the fourth volume of the very useful *Philosophische Bibliothek*, published formerly by the Dürr'sche Buchhandlung. The translation is in the main accurate, but does not throw new light on the text, and in passages of any difficulty is apt to go astray. Thus in book i., chap. i., we have at 402^{b}6 *καθάπερ ζῴου*, 'wie es beim lebenden Wesen ist' (where the context shows that 'ist' is wrong), at 23 *κατὰ τὴν φαντασίαν* 'vermöge unserer Einbildungskraft' (*φαντασία* is here quite untechnical), at 403^{b}9 *οὐκ ἔστι τις . . . ἀλλ' ὁ φυσικός* 'ist doch kein anderer als der Physiker,' at 12 *ὅσα δὲ μὴ ᾖ τοιαῦτα* 'was aber nicht solcher Art ist' (*ᾖ* neglected). Again, to take another famous chapter, in iii. 5 no attempt is made to do justice to the structure of the first sentence; *ὥσπερ* is simply neglected. The treatment of the particles in general is not very satisfactory. For the most part, however, the sense is very fairly given throughout.

The notes are short and are largely textual. They are in the main sensible, but display somewhat excessive haste to emend where the received text is confirmed by the ancient commentators, and is on a due consideration quite defensible. Dr. Busse is somewhat too ready to follow Torstrik (412$_{b}$20, 417^{a}22, 30, 32, 419^{b}2, 24), Essen (405^{a}4, 420^{a}33, ^{b}24-26), Susemite (416^{a}3, 423^{a}13), or Freudenthal (431^{a}17-22) in alteration of the text. In 417^{a}13 Torstrik's *αἰσθητόν* seems to be right, and in 420^{a}6 there is much to be said for his reading. In 413^{b}22 *καὶ φαντασίαν*, which with Freudenthal Dr. Busse omits, can be defended by a comparison with 434^{a}1. There is much to be said for the emendations by Belger, Diels, and Steinhart, adopted at 402^{b}16, 404^{a}5, 420^{a}4, but the credit of the last properly belongs to Pacius. In 431^{a}29 also *κἀκεῖνα*, adopted from Pacius, is quite likely to be right. In 426^{a}27 Dr. Busse must be right in following Trendelenburg, unless we should read *εἰ δὴ συμφωνία* <*ἥ*> *φωνή τίς ἐστιν*, with the same meaning.

Dr. Busse's own emendations cannot be pronounced successful. Those at 402^{a}19, 404^{b}22, 405^{b}28, 406^{a}12, 408^{b}17, 410^{a}23-^{b}2, 412^{b}28, 413^{a}30, 416^{b}23-25, 27, 419^{a}34, 420^{b}23, 421^{a}1, 424^{a}23, 425^{a}15, 426^{b}15-17, 429^{b}27, 430^{b}1-5, 25, 431^{a}29, 434^{a}32, ^{b}3-7, seem to be unnecessary. At 418^{a}29, where he proposes *τὸ γὰρ* <*δι' ἄλλο*> *ὁρατόν ἐστι χρῶμα*, the text may be fairly well defended as by Mr. Hicks, or we might read *τὶ γὰρ ὁρατόν ἐστι χρῶμα*, which seems to have been expected by Simplicius and has been proposed by Prof. J. A. Smith, or *τὸ γὰρ ὁρατόν ἔστω χρῶμα*, which is perhaps confirmed by Themistius's *νῦν δὲ τοσοῦτον κείσθω τὴν πρώτην, ὅτι τὸ ὁρατόν ἐστι χρῶμα*. At 426^{a}28 the whole phrase *καὶ ἔστιν ὡς οὐχ ἓν τὸ αὐτό* is more likely to be a gloss than, as Dr. Busse thinks, the words *ἔστιν ὡς οὐχ ἕν*. He has, however, one emendation which is worth serious consideration: 434^{a}13-15 *ὁτὲ δ' ἐκείνη ταύτην, ὥσπερ σφαῖρα—φέρεται δὲ ἀεὶ ἡ ἄνω ἀρχικωτέρα—καὶ κινεῖ ἡ ὄρεξις τὴν ἐρεζιν, ὅταν ἀκρασία γένηται.*

W. D. Ross.

Weltbegriff und Erkenntnisbegriff. Von Dr. Viktor Kraft. *Eine erkenntnistheoretische Untersuchung.* Leipzig: Verlag von Johann Ambrosius Barth, 1912. Pp. xii, 232.

The author of this work sets himself a very ambitious task. He endeavours to survey each of the principal theories of the nature of reality from the standpoint both of epistemology and of ontology: to show what they mean and where they fail: and to prove, in conclusion, that the 'grossartig' and 'ungeheuer bedeutsam' theory of realism is alone worthy to hold the field. The author is well equipped for his task in point of erudition. But the course of his main argument is not convincing even to those of us who are ourselves realists.

The two opening parts of the book are introductory. The task of philosophy, we are told, is to exhibit, on a sound basis, the systematic unity of the contents of experience, and this is interpreted in the unduly restricted sense of showing the unity of psychical and physical. The second conducts us through the whole history of philosophy, but the author guides us as if we were a Cook's party. He does not allow us to linger, and no specialist would be satisfied with his account. It is misleading, for instance, to contrast Kant with Berkeley on the ground that the latter and not the former maintained that all ideas were subjective modifications. 'Ideas,' according to Berkeley, are 'objects' of mind, they are 'in mind,' 'not by way of mode but by way of idea'.

The critical part of the work weighs and rejects dualism, idealism and positivism. The rejection of Cartesianism is not new: the Cartesian has no valid way of exit from his private self. There is some doubt, however, as to the precise meaning of 'positivism'. It is not Comte's theory —that we know; and officially it means only that we deny the knowledge of substantial mind or substantial matter, but the author tends to treat it, for polemical purposes, as mere presentationism—the doctrine that nothing exists save a string of psychical facts. It is unfortunate that he has not attempted any serious critique of the category of substance. It must mean more than a relation of content, we are told, but how much more seems left to common sense.

And this is the rock on which both idealism and positivism founder. Both involve solipsism. In saying this the author, on his premises, commits a double fallacy. In the first place idealism and positivism should coincide, since, according to him, the fault of idealism is that it can only interpret substance as a special sort of relation. In the second, neither theory is solipsistic; since the solipsist holds that we have ground for supposing the existence of one substance in the further sense required—though only one. The question is worth discussing, but the author only proves his point—which is the crux of his argument—by tedious reiteration. The only other ground is the obvious but insufficient one that *Bewusstsein überhaupt* must take place within individual consciousness.

The rejection of solipsism is the ground for believing in realism. Realism is the only theory of the world which can justify a belief in other selves. And this realism is straightway interpreted as meaning natural science plus a collection of selves, although one would have supposed that neither an idealistic monism which tried to show that an *infra* personal feeling was bound to involve a *supra* personal Absolute, nor an idealistic pluralism which maintained, on other grounds, that what we call matter must really be spirit, would be affected by the author's argument. And there are two other serious objections. The author maintains that our only immediate acquaintance with reality is mere meaningless sensation, and he has given no grounds for supposing that the arguments by which he refuted dualism do not apply to his own doc-

trine. In the second place, while denying that he intends to adopt the traditional distinction of primary and secondary qualities, he does maintain that we are bound to maintain that some of our sense-data—as they appear—are actual bits of the physical world. But how, in that case, has he answered a previous objection of his own, *viz.*, that the ground for rejecting naïve realism is not that we see less than the actual but that what we see is always distorted? Surely this holds for spatial as for other qualities.

There is a modest section in which a more adequate groundwork for realism is suggested. There we are informed that the object of cognition is never identical with the act of apprehension and never contained in that act. But this suggestion is quite disconnected with the general argument of the book.

J. Laird.

Das Weltproblem vom Standpunkte des Relativistischen Positivismus aus Historisch Kritisch Dargestellt, von Joseph Petzoldt. Zweite, Vermehrte Auflage. Leipzig und Berlin, Druck und Verlag von B. G. Teubner, 1912. Pp. xii, 210.

Stimulated by certain ideas of Avenarius, Mach and Schuppe, Herr Petzoldt has drawn the rough outlines of a philosophy which seeks to combine the 'positivist' view, that the function of science is just to describe what is actually observed, with the 'relativist' view, that there are no 'absolute' realities, that all reality is, and is known, only in relation to other realities. The conception of 'substance' offends against both these views, inasmuch as it represents an *unobserved* something which is supposed to support observed qualities, and also implies the existence of an *absolute* something which is supposed to remain unchanged amid all sorts of merely phenomenal changes in its qualities and relations. Accordingly, 'substance' is treated as the original sin of philosophers, and Herr Petzoldt runs through the whole history of philosophy in order to trace the baneful influence of this notion on science and civilisation. Of the historic philosophers only two have won our author's sympathy. They are Protagoras, the father of Relativism, and Hume, the destructive critic of 'substances' and 'powers'. All other philosophers have simply hindered the advance of knowledge by continually rehabilitating the notion of 'absolute substance' in all sorts of new guises (the Platonic Ideas, the Kantian *Ding an Sich*, etc.). It remained for Avenarius, Mach, Schuppe, and Herr Petzoldt to complete the work of Protagoras and Hume. Thanks to them the history of philosophy has at last accomplished its task, namely, to explode the notion of substance, and thereby to remove the greatest obstacle in the path of science. Reality is not composed of absolute Substance or Substances having certain qualities, but just consists of these qualities standing in various relations, and changing with them. What these qualities may be apart from these relations, is a silly question to ask. Still, since there cannot be relations without related terms, Herr Petzoldt does not succeed in completely exorcising the old Adam. Under the *alias* of 'Qualities,' the banished 'substances' are merely grinning at him.

A. Wolf.

Josef Dietzgens Sämmtliche Schriften. Edited by EUGEN DIETZGEN. Wiesbaden: Verlag der Dietzgenschen Philosophie, 1911. 3 vols. Pp. 226, 356, 292.

These volumes contain a long essay on "Kopfarbeit"; shorter essays on the religion of social democracy, the philosophy of the same, and on the nature and limits of knowledge; a number of letters or brief disquisitions on logic, especially 'the logic of democracy and the proletariat'; a treatise of some seventy pages on the theory of knowledge from a socialistic point of view; a more extensive treatise of about 100 pages on philosophy; and some private letters, open letters and fugitive pieces. The teaching of the volumes is identical with, or related to, that contained in two books from the same source previously reviewed in this Journal. The first of these new volumes is prefaced with a sketch of Josef Dietzgen's life by his son.

S. J. CHAPMAN.

Il Diritto Come Norma Tecnica. ADOLFO RAVÀ. Cagliari, 1911. Pp. ix, 125.

The author's thesis may be stated briefly thus. The widely-spread notion that Jurisprudence and its laws are a part of moral science is manifestly erroneous. For actions are only of moral worth when, as Kant taught, they are done from a sense of their intrinsic goodness, and express the "good will". Hence, if there are such things as moral laws or norms, they must be, as Kant held, purely formal. But positive law cannot command obedience to a purely formal imperative. Its commands are always relative to an end, *viz.*, the maintenance of civilised human society, and the actions commanded are not commanded as intrinsically good, but as means to this end. In Kantian language, the norms of Jurisprudence are at best hypothetical Imperatives. Consequently they should properly be classed with what Kant calls "rules of skill," not with "laws of duty". This seems, at first sight, to lead to the paradox that morality and law are entirely disconnected. On further consideration, however, we are led to see that the particular *end* from which the Imperatives of Jurisprudence derive their force, *viz.*, the maintenance of society is one which we not merely do will, but which we are ethically bound to will, since the individual himself cannot exist and exhibit morality except as a member of society. Hence, though the commands of Law are logically mere "rules of skill," the nature of the game of which they are the rules requires that they shall be adjusted to the moral duty of maintaining a society in which the attainment of the "good will" is possible. We now take a further step. Strictly speaking, though there is a moral ideal, there are no moral "laws". For, as the fate of Kant's own ethical doctrine has made clear to every one, no specific dutiful act can really be enjoined by a law which is purely formal and independent of any consideration of ends; on this point Utilitarianism has always been the doctrine of sound sense. In the end then, *all* laws are technical, "rules of skill," and thus the question whether the norms of Jurisprudence are ethical or technical (*i.e.*, whether, in Kant's phraseology, they are categorical or hypothetical) turns out to be senseless. But it was worth while to discuss it for the sake of the light the discussion has thrown on the true nature of morality.

The author's position thus is virtually a reassertion of the Hegelian criticism of the Kantian ethics, for which he expresses high admiration.

In his own words, he substitutes for a morality of legalism one of "the impulses, of the ideal, and of love". One cannot help sympathising with this distrust of mere legalism, but yet, surely there is an ultimate doubt. "The impulses," are not always towards good, "ideals" may be far from admirable, and, as the ancients knew, Eros can pull down as well as build up. In Mr. Ravà's essay, as in all writing on Ethics which leaves the last word to the individual intuition, I cannot help missing some recognition of the worth of authority, or, I may say, "ethical tradition," as bearing witness not only to the means which history has shown to be effective in attaining the good, but as to the nature of the good itself. If I have to discover the good by looking within my own heart, I should surely also look by the light of the judgments of "men of good will" who have gone before.

A. E. Taylor.

Received also:—

G. W. F. Hegel, *The Phenomenology of Mind*, translated, with an introduction and notes, by J. B. Baillie, London, Swan Sonnenschein & Co., Ltd.; New York, The Macmillan Co., 1910, pp. xliv, 427 + viii + 397.

H. S. Macran, *Hegel's Doctrine of Formal Logic*, Being a Translation of the First Section of the *Subjective Logic*, Oxford, at the Clarendon Press, 1912, pp. 315.

Émile Boutroux, *The Beyond That is Within, and Other Addresses*, translated by Jonathan Nield, London, Duckworth & Co., 3 Henrietta Street, Covent Garden, W.C., 1912, pp. xv, 138.

Émile Boutroux, *Historical Studies in Philosophy*, Authorised Translation by Fred Rothwell, B.A., Macmillan & Co., Ltd., London, 1912, pp. ix, 336.

Charles A. Dubray, *Introductory Philosophy: A Text-Book for Colleges and High Schools*, Longmans, Green & Co., London, New York, Bombay and Calcutta, 1912, pp. xxi, 624.

Wilhelm Wundt, *An Introduction to Psychology*, translated from the Second German Edition by Rudolf Pintner, London, George Allen & Co., Ltd., 44 and 45 Rathbone Place, 1912, pp. xi, 198.

Dr. Paul Dubois, *The Education of Self* (*L'Education de Soi-Même*), Authorised Translation by Edward G. Richards, M.B., C.M., Funk & Wagnalls Company, New York and London, 1911, pp. 349.

Duncan Taylor, *The Composition of Matter, and the Evolution of Mind. Immortality a Scientific Certainty*, London and Felling-on-Tyne, The Walter Scott Publishing Co., Ltd., New York, 3 East 14th Street, and Melbourne, 1912, pp. vi, 176.

Hugh Pope, O.P., S.T.M., *The Scholastic View of Biblical Inspiration*, Reprinted with permission from the Irish Theological Quarterly, for July, 1911, Rome, Printing Office of Riccardo Garroni, Piazza Mignanelli, 23, 1912, pp. 52.

Ambika Charan Mitra, *The Principles of Logic, Deductive and Inductive*, Calcutta, S. R. Lahiri & Co., 56 College Street, 1912, pp. viii, 341.

S. Radhakrishnan, *Essentials of Psychology*, Henry Frowde, Oxford University Press, London, New York, Toronto, and Melbourne, 1912, pp. 75.

James Owen Dorsey and John R. Swanton, *A Dictionary of the Biloxi and Ofo Languages, accompanied with Thirty-One Biloxi Texts and Numerous Biloxi Phrases* (Smithsonian Bulletin), Washington, Government Printing Office, 1912, pp. v, 340.

Gaston Sortais, *Histoire de la Philosophie Ancienne, Antiquité Classique —Époque Patristique Philosophie Médiévale—Renaissance*, Paris, P. Lethielleux, Libraire-Editeur, 10 Rue Cassette, 1912, pp. xviii. **627.**

Eugène Dupréel, *Le Rapport Social, Essai sur L'Objet et la Méthode de la Sociologie*, Paris, Libraire Félix Alcan, 108, Boulevard Saint-Germain, 1912, pp. iv, 304.

Paul Archambault, *Stuart Mill : Choix de Textes et Etude du Système philosophique, Les Grands Philosophes, Français et Etrangers*, 11 Portraits et Gravures, Société des Editions, Louis-Michaud, 168, Boulevard St.-Germain, Paris, pp. 222.

J. B. Séverac, *Condorcet : Choix de Textes et Introduction, Les Grands Philosophes, Français et Etrangers*, 9 Gravures et Portraits, Société des Editions, Louis-Michaud, 168, Boulevard St.-Germain, Paris, pp. 223.

H. Kazem Zadeh, *Relation d'un Pèlerinage à la Mecque en* 1910-1911, Paris, Ernest Leroux, Editeur, 28 Rue Bonaparte (IVe), 1912, pp. 84.

Adolf Phalén, *Das Erkenntnisproblem in Hegels Philosophie, Die Erkenntniskritik als Metaphysik*, Upsala, 1912, Akademische Buchdruckerei, Edv. Berling, pp. vii, 458.

Hans Driesch *Ordnungslehre, Ein System des Nicht—Metaphysischen Teiles der Philosophie*, mit besonderer Berüchsichtigung der Lehre vom Werden, Verlegt Bei Eugen Diederichs in Jena, 1912, pp. 355.

Otto Apelt, *Platonische Aufsätze*, Verlag von B. G. Teubner in Leipzig und Berlin, 1912, pp. v, 296.

Julius Baumann, *Neues zu Sokrates, Aristoteles Euripedes*, Leipzig, Verlag von Veit & Comp., 1912, pp. 127.

Rudolf Eucken, *Der Wahrheitsgehalt Der Religion*, Dritte Umgearbeitete Auflage, Leipzig, Verlag von Veit & Comp., 1912, pp. xiv, 422.

D. Friedrich Aug. Berth. Nitzsch, *Lehrbuch der Evangelischen Dogmatik*, Dritte Auflage Bearbeitet von Professor Lie. Horst Stephan, Privatdozent in Marburg, Zweiter Teil (Schluss des Werkes), Tübingen, Verlag von J. C. B. Mohr (Paul Siebeck), 1912, pp. 462.

Dr. Richard Avenarius, *Der Menschliche Weltbegriff*, Dritte Auflage, *Vermehrt um den Abdruck von Wilhelm Schuppe, Offener Brief an Avenarius über die "Bestätigung des Naiven Realismus" und von Richard Avenarius, Bemerkungen zum Begriff des Gegenstandes der Psychologie*, Leipzig, O. R. Reisland, 1912, pp. xxvi, 274.

Joh. Gottl, Fichte, *Werke*, Auswahl in Sechs Bänden, Sechster Band, *System der Sittenlehre* (1812), *Transzendentale Logik, Staatslehre oder über das Verhaltnis des Urstaates zum Vernunftreiche*, Verlag von Felix Meiner in Leipzig, 1912, pp. 680.

Hermann Lotze, *Logik, Drei Bücher vom Denken, vom Untersuchen und vom Erkennen, mit der Ubersetzung des Aufsatzes ; Philosophy in the Last Forty Years, einem Namen- und Sachregister, Herausgegeben und eingeleitet von Georg Misch*, Leipzig, Verlag von Felix Meiner, 1912, pp. cxxviii, 632.

Oswald Külpe, *Immanuel Kant Darstellung und Würdigung*, Dritte, verbesserte Auflage mit einem Bildnisse Kants, Druck und Verlag von B. G. Teubner in Leipzig, 1912, pp. vi, 153.

Dr. A. Nathansohn, *Allgemeine Botanik*, mit 4 farbigen und 5 schwarzen, Tafeln und 394 Abbildungen im Text, 1912, Verlag von Quelle & Meyer, in Leipzig, pp. viii, 471.

E. Troilo, *Il Positivismo e I Diritti Dello Spirito*, Torino, Fratelli Bocca Editori, Milano, Roma, 1912, pp. xv, 360.

Lorenzo Michelangelo Billia, *L'Esiglio Di Sant' Agostino, Note Sulle contraddizioni di un Sistema di filosofia per decreto*, Seconda Edizione, Accrescuita E. Rifatta, Torino, Libreria Internazionale, Editrici Carlo Clausen, F^lli^ Fiandisio & Co., Successori, 1912, pp. xv, 295.

VIII.—PHILOSOPHICAL PERIODICALS.

Philosophical Review. Vol. xxi., No. 1. **O. Kuelpe.** 'Contribution to the History of the Concept of Reality.' [The concept of reality embraces all those objects whose determination, whether by the special sciences or by their supplementary metaphysics, is regarded as independent of the cognising subject. Specific grounds are required for the postulation, and specific grounds are employed for the determination of the real: "in all sciences of fact, psychology and the humanistic disciplines included, reality is postulated and determined. The investigation of this process, its forms, grounds and results, constitutes for the philosopher of immanence a significant task." Historically, the process may be followed in connexion exclusively with the history of philosophy. The author gives a brief sketch of the concept of reality from the pre-Socratics to the present time.] **A. O. Lovejoy.** 'The Problem of Time in Recent French Philosophy. I. Renouvier and Recent Temporalism.' [Temporalism is the metaphysical theory which maintains the reality and irreducibility of time, the transitive and self-augmentative nature of empirical reality, and the pertinency and primacy of the time-concept in philosophical problems. The present study is to consider its development, and to appraise the argument from temporalism to anti-intellectualism, *i.e.*, to doctrines which explicitly or implicitly assert that reality may be in conflict with the 'laws of thought'. The authors to be examined are Renouvier, Bergson, Pillon and James.—the work of the latter constituting a chapter in French philosophy. The present paper deals with the initiator of temporalism, Renouvier: with his general phenomenalism, his finitism, his attitude to evolutionary cosmology and biology, and especially with those omissions in his treatment of the category of time which left unsolved problems to his successors and out of which anti-intellectualistic tendencies have been generated.] **A. K. Rogers.** 'Nietzsche and Democracy.' [The fundamental fact for Nietzsche is the will to power He appeals first to nature; and if it is objected that development consists in submitting the character of the natural man to a social morality, he replies secondly that our civilisation has brought with it physiological and therefore moral degeneration. We might rejoin that Nietzsche's ideal life simply cannot be lived: but that is unsatisfactory: a better answer is that brute force has been well exchanged for influence, and that influence is rooted in sympathy; that the height of our excellence consists not in enslaving others, but democratically in stimulating them, that their competition may evoke our own energies. And when Nietzsche asserts, thirdly, that his æsthetic ideal of the superman is based on the teaching of science, we may safely say that the very notion of such an ideal implies the substitution of artificial for natural selection.] **W. H. Sheldon.** 'The Consistency of Idealism with Realism.' [Idealism rests on the axiom of system or dependence; everything must be grounded. Realism rests on the axiom of independence; the here-and-now has its own finality. If we keep both axioms, we must, in the realm of objects,

free the 'completed infinite' from contradiction without sacrifice of completeness; and, in that of abstract thought, show that even for the law of contradiction sameness-in-difference is quite consistent. This task the writer essays, by statement, objection, and reply. Realists, he concludes, rightly assert the reality of abstracted unreduced facts, but wrongly deny that they may also be reduced to terms of mind; idealists rightly assert the finality of that reduction, but wrongly deny the equal finality of the abstract; so the contradiction is removed.] Discussions. **J. Dewey.** 'A Reply to Professor Royce's Critique of Instrumentalism.' [Running criticism of Royce's essay. As method for philosophy, instrumentalism indicates a more severe intellectual conscience; in substance, it means recognition of the intelligence as the way in which future possible consequences become effective in the present, and a recognition of the falsity of the current notion of the egotistic isolation of conscious life. In other words, it connects intelligence with a genuine future, and stresses the social constitution of even private experience, and especially of any experience that has assumed the form of knowledge.] Reviews of Books. Notices of New Books. Summaries of Articles. Notes.

Psychological Review. Vol. xix., No. 1. **H. C. Stevens** and **C. J. Ducasse.** 'The Retina and Righthandedness.' [Description of an apparatus which admits of the comparison of lines or distances in any meridian of the field of vision, upon either side of the fixation-point, separated or opposed, and which may be adjusted either by observer or by experimenter. In general, the right half of an extent in the field of vision is overestimated, by both eyes. Now the left halves of the retina are connected with the left hemisphere; if, then, attention is caught by objects projected on these halves, it is the right hand which will make grasping movements; and right-handedness follows, as a direct result of practice.] **K. Dunlap.** 'Difference-sensibility for Rate of Discrete Impressions.' [Report of experiments with sound (modified telegraph sounder; one or two intensities), light (helium tube), sound and light together, and electrical stimuli. Under the conditions, sensibility for rate-differences is more acute than that for time-differences: rate-judgment, therefore, is not essentially a judgment of interval between stimuli. Subjective rhythmical grouping of the impressions gave in every case a more acute difference-sensibility; the perception of rhythm, therefore, is not essentially a mode of the perception of time. The difference limens for a standard of 232° are below 2 per cent., for 435·5° below 3 per cent. Vision is less favourable for discrimination than audition. The results of the bimodal series (vision appears slower) and of the bi-intensity series (weak sounds appear slower) may perhaps be harmonised on the basis of strain-sensations.] **H. A. Carr.** 'Some Novel Experiences.' (1) Positive after-images of motion: the persistent image of an eye, in the dark room, was observedto wink and slightly to rotate, as the actual eye had done in preceding prolonged observation. (2) An illusion of double awakening: the subject-dreams, with the usual implicit acceptance of the reality of the dream-experiences; then she appears to wake, the awakening being always accompanied by a noticeable increase in the apparent illumination of the visual world; then follows actual arousal, with the realisation that the former awakening was illusory. (3) Recall through similarity: an absent-minded subject, who had forgotten her companion of the day before, is reminded of him by the sight of a packet like that which he had carried.] **H. L. Hollingworth.** 'The Influence of Caffein on the Speed and Quality of Performance in Typewriting.' [Speed is quickened by doses of 1-3 grains, retarded by doses of 4-6 grains of caffein alkaloid. Quality, as

measured by number of corrected and uncorrected errors, is superior for the whole range of doses (1-6 grains); both types of errors are affected in about the same degree. Increase of speed is not gained at the expense of additional errors.] **F. Kuhlmann.** 'A New Memory Apparatus.' [The exposing apparatus furnishes an easy means of making up a large amount of memory material; brings the terms of a series suddenly into view and removes them as suddenly; and makes exposure noiselessly. The apparatus for the control of the exposure-interval makes possible the separate study of the processes of perception and of immediate recall. A third apparatus enables the experimenter to vary, independently, magnitude of retinal image and distance for which the eyes are accommodated.]

American Journal of Psychology. Vol. xxiii., No. 1. **B. E. Roethlein** and **J. W. Baird.** 'The Relative Legibility of Different Faces of Printing Types.' [The legibility of a letter depends on form, size, heaviness of face, width of margin, position in letter-group, nature of adjacent letters. Certain faces, and certain letters of the faces, are far more legible than others, the difference being more pronounced with isolated than with grouped letters; there is great need for modification of certain letters of the alphabet. The first letter of a group has the advantage as regards legibility; then the last; the middle letters fare worst; the size and form of adjacent letters play an important part. Quality and texture of paper are of secondary moment; heavy-faced types are, within limits, preferable to light-faced.] **E. B. Titchener.** 'The Psychology of the New *Britannica*.' [A detailed and, on the whole, unfavourable review of the organisation and contents of the psychological articles in the eleventh edition.] **E. C. Sanford.** 'The Function of the Several Senses in the Mental Life.' [A preliminary sketch of the functional values and interrelations of the senses leads, through illustrations of the parts they play in hallucination, illusion, dreams, art, and of the consequences of their separate loss, to the main point of the article: that the developed mental life is a matter, not of direct sense-experience, but of sensory and linguistic symbols. Touch gives us the world of space, material reality, external force; active touch, energy, active efficiency, freedom; vision, another world of space and things; hearing, the symbolic machinery of thought; the organic senses, our intuitions of ourselves and the basis of our emotions. Farthest removed from their sensory origin are the symbols of transcendental geometry and of theory of numbers.] **F. L. Wells.** 'The Relation of Practice to Individual Differences.' [Report of result of two tests, continuous addition and cancellation of zeros, carried on for thirty days with a group of five men and five women. The tests show a difference in the individual's (or function's) fundamental plasticity, or ability to profit by practice; a difference in the amount of practice actually experienced; and constitutional (neural) factors, other than plasticity, which determine efficiency at the beginning of special practice: the influences are in the order given. Plasticity and efficiency in the tests, and episodic changes in the organism which affect efficiency, are all specific; no notable sex-difference appeared. Superiority at the beginning of special practice is not necessarily or even probably connected with poor prospect of future improvement.] **H. L. Hollingworth.** 'The Influence of Caffein Alkaloid on the Quality and Amount of Sleep.' [Small doses (1-4 grains), pure or in syrup, do not disturb sleep; larger doses (6 grains) induce marked impairment of sleep; both rules have a few exceptions. The effect is enhanced when the drug is taken on an empty stomach, or without solid food, or on successive days; it does not depend on age, sex, or previous caffein habits; it varies

inversely with increase in bodily weight. These results hold both for quality and for length of sleep.] Minor Studies from the Psychological Laboratory of Vassar College. **M. V. Atherton** and **M. F. Washburn.** 'XVIII. Mediate Associations Studied by the Method of Inhibiting Associations; an Instance of the Effect of *Aufgabe*.' [The observer is instructed, on hearing a stimulus word, to respond by a word that has no associative connexion with it. The results show sound associations; various modes and mechanisms of perseveration; the occurrence of associated ideas whose relation to the stimulus is at the time overlooked; and 'mediate' associations, *i.e.*, ideas connected with the stimulus word by an intermediate process that has no conscious accompaniment. There were seventy-seven (11·6 per cent.) mediate associations out of a total of 662.] **M. W. Chapin** and **M. F. Washburn.** 'XIX. A Study of the Images Representing the Concept "Meaning".' [The images described by 193 college students are all either visual (50 per cent.), kinæsthetic (36·7 per cent.), or visual-kinæsthetic (13·3 per cent.). All but one of the kinæsthetic, and all but seventeen of the visual images, were relevant, *i.e.*, interpretable in the light of some part-meaning of 'meaning'. The movements imaged are those of effort to find and of the process of search. The visual images are most commonly connected with the ideas of disentangling; digging out, revealing an inner aspect; grasping; equivalence; and illumination.] **J. S. van Teslaar.** 'Recent Literature on Psychoanalysis.' [Review of ten psychoanalytical studies, including Freud's *Bemerkungen über einen autobiographisch beschriebenen Fall von Paranoia* and *Zwei Prinzipien des psychischen Geschehens*.] Editors. 'Alfred Binet.' Book Reviews. Book Notes.

Cambridge Magazine. Saturday, 11th May, 1912. In the number of the Cambridge Magazine published on 11th May, Mr. G. H. Hardy begins a series of articles on the 'New New Realism,' by which he means the latest views of Messrs Moore and Russell. Mr. Hardy describes the Old New Realism of which he was an adherent, and speaks regretfully of the objectively false propositions which have been displaced by Mr. Russell's theory of judgment. I sympathise with Mr. Hardy on the point, and I do not feel confident that Mr. Russell's present theory will necessitate a permanent parting from our old friends. It is a little surprising that Mr. Hardy should not remark how far the 'New New Realism' is from its old position with regard to objects of perception; here it seems to me to have improved but to have ceased to be particularly realistic, except in rightly retaining the constantly forgotten distinction which it was Mr. Moore's merit to point out in his 'Refutation of Idealism'. We look forward to the continuation of this series of articles.

Journal of Philosophy, Psychology and Scientific Methods.—ix., 9. **R. W. Sellars.** 'Is there a Cognitive Relation?' [No; what we have in cognition is an *attitude* towards objects considered real.] **K. Schmidt.** 'Inversion.' [Is valid *sometimes*, when the conditions 'not-B exists' or 'B exists' is satisfied in the particular universe of discourse.] New York Branch of the American Psychological Association. ix., 10. **H. M. Kallen.** 'Beauty, Cognition, Goodness.' [Beauty is neither in the mind nor in the object, but is "the optional mode of that positive intrinsic value-relation which binds the mind to its object".] **M. E. Haggerty.** 'Imitation and Animal Behaviour.' [The distinction of instinctive and voluntary imitation is too vague to be useful, but there is behaviour to be described as imitation which should be studied further experimentally.] ix., 11. **W. H. Sheldon.** 'Chance.' [Suggests that

chance is not a name for our ignorance, but an "objective category," in the sense of events which have no cause, since "there not only is a certain aspect of fact which is outside of causality," but "a perfectly definable intelligible tendency in physical events toward variation from law . . . nearly . . . as widely verified as laws themselves".] **J. E. W. Wallin.** 'Experimental Oral Orthogenics: an Experimental Investigation of the Effects of Dental Treatment in Mental Efficiency.' [The average gain in all the tests is 57 per cent., so that free dentistry for school children would pay the community even commercially.] **E. P. Poulton.** [A letter about a mistake of Prof. Punnett concerning some mimicking Danaines.] **E. B. McGilvary.** 'Prof. Dewey's "Awareness".' [Asks whether inhibitions are classed by Dewey among 'organic releases'.] ix., 12. **W. T. Marvin.** 'Dogmatism *v.* Criticism.' [Neo-realism should be called neo-dogmatism—in a laudatory sense.] **K. Schmidt.** 'Studies in the Structure of Systems. 2. The Deductive System Form.' [The Aristotelian form of proof accounts neither for the vicariousness of axioms nor for the occurrence of the new.] **B. Muscio.** 'Miss Calkins' Reply to the Realist.' [*Cf.* viii., 17.] ix., 13. **A. C. Armstrong.** 'The Progress of Evolution.' [A discussion of the concepts and principles implied by evolution is needed.] **P. Bovet.** 'The Feeling of Oughtness: its Psychological Conditions.' [Obligation arises from *orders* given by some one loved and admired.] **E. B. Gilvary.** 'Prof. Dewey's Brief Studies in Realism.' [Are "void as against realists who . . deny the existence of a 'mind' to which objects are presented".] **H. W. Wright.** Twelfth Meeting of the Western Philosophical Association. ix., 14. **M. Meyer.** 'The Present Status of the Problem of the Relative between Mind and Body.' [*Alias* 'the Ghost Theory of Animal Behaviour'—an attack on McDougall's book, which keeps to generalities.] **A. K. Rogers.** 'Some Aspects of Professor Fite's Individualism.' [Largely sympathises.] **H. L. Hollingworth.** 'New York Branch of the American Psychological Association.' [Abstracts of several papers of pedagogical interest.] ix., 15. **T. de Laguna.** 'Opposition and the Syllogism.' [An attempt "to show that the syllogistic relation is very closely allied to that opposition".] **G. H. Mead.** 'The Mechanism of Social Consciousness.' ["'The 'me' is a man's reply to his own talk. . . . It is an importation from the field of social objects into an amorphous, unorganised field of what we call inner experience."] **J. H. Leuba.** 'Religion and the Discovery of Truth.' [*Apropos* of Stratton's *Psychology of the Religious Life.* Argues that religious beliefs do not obtain pragmatic verification.] ix., 16. **H. B. Alexander.** 'The Conception of Soul.' [Infers, from an anthropological survey, that 'soul' properly means personality.] **K. Schmidt.** 'Studies in the Structure of Systems. Three Postulates.' [Contrasts the typically modern conception of scientific principles as postulates, between which there is a choice, and believed in "because true consequences follow from them," with the older Aristotelian notion that they are self-evident 'axioms'. But the modern view is wrongly applied to Plato, who demanded that the scientific 'hypotheses' should be validated by deduction from an 'unhypothetical' principle, the Idea of Good. His theory is, therefore, the same as Aristotle's, who improved on it by observing that deduction from a single principle was impossible.]

British Journal of Psychology. Vol. iv., Pt. 2. **H. J. Watt.** 'The Elements of Experience and their Integration, or Modalism.' [An attempt to secure the independence of psychology by showing that experience is capable of more exact systematisation than is generally accepted. Method: detailed comparative consideration of introspective aspects of

elements, such as sensation, and of states like motion, distance, feeling and recognition. Thus criteria of attributes of elements, and derivativeness of other experiences, are obtained. Comparative independence of sensations makes them the best starting-point for study of elements of experience and their integration. Questions as to qualitative differences between sensations must ultimately be decided by an examination of the psychological characteristics of the sensations in question, not merely by fact that those sensations are due to the stimulation of the same (or of different) sense organs: touch sensation, *e.g.* may arise through medium of two different systems of end-organs. Typical characteristics of sensation discussed; of these the attribute of Order (not temporal) is the most important for the higher developments of experience—not merely for localisation. In case of sound sensations, pitch is taken as an attribute determining order, all tones sharing same "sound quality". So for sound we get all the attributes—quality as such, or mere sound, order or pitch-place, and extensity or voluminosity. Peculiarity of tone lies in the fact that two of the attributes, pitch and voluminosity, are "mutually dependent variables". The combination of sensory elements must be explained by intrinsic affinities, not merely ascribed to physiological conditions. Motion and distance are discussed fully. Motion obtained when successive sensations of same sense, differing within certain limits in attribute of order, fuse with one another; articular movement sensations ascribed to differences in order of sensations of position. In case of all sensations rate of change of order must be above a certain minimum, if motion is to be experienced; within the time limits of motion, motion varies in speed. Motion is the integration of the differences in respect of order of the given sensations: yet it cannot be analysed into series of sensations of position: nor is it an "unconscious inference" from the sensations, nor are these sensations themselves lost in the integration, so this view is neither sensationalism nor "mental chemistry". Influence of motion on attention explained as strictly analogous to that of any isolated sensation among a group of dissimilar ones. Complete analogy shown between visual motion and melody. Distance (a similar modification of experience due to integration merely from attribute of order) shows similar characteristics. Author proceeds to show how his method may be used to reveal supposed mental elements as "modifications from integrations as yet undiscovered". Similarity between Feeling and Motion shown in detail; as latter may be explained as integration of sensations so may former as integration of some attribute of experience, though integrative basis of feeling not yet discovered. So with Recognition—a secondary modification of order: resembles motion and feeling in many characteristics: *e.g.* all three (1) are independent of any one particular sense-organ; (2) are not reproducible in isolation; (3) do not associate with one another; (4) cannot be studied introspectively apart from experiences to which they are attached, etc. Author suggests his method might be applied to all forms of experience not shown to be elementary, as tested primarily by standard of sensational type.] **W. Mulder.** 'The Fusion of Sensations of Rotation.' From the Physiological Laboratory, Utrecht. [Object: to find out what happens when a person is subjected to a periodically interrupted rotation, the periods of rotation and interruption being always of equal length. Subjects seated on revolving table at an angle which limited stimulation to horizontal semi-circular canals. Table alternately rotated and stopped. Results depend on length of periods of rotation and interruption: 0·9″ gives experiences of rotation and rest; 0·7″ gives oscillation. When periods reduced to 0·44″ subject thinks he is at rest all the time, the after-sensation of reversed movement fusing with sensation to give rest;

more strictly, effect of stimulus is annulled before it gives rise to sensation. Length of periods of rotation and interruption at which illusion of rest occurs, varies with speed of rotation, being shorter for higher speed up to 12° per sec. **Francis Aveling.** 'The Relation of Thought-Process and Percept in Perception.' [Problem: to discover whether there are any forms of sensorial structure of percepts correlative to differences in thought-processes involved in perception. Pictures and objects exposed for fraction of a second. Sometimes instruction given that object should be perceived as an individual, sometimes as type: control experiments without instruction. Seventy-five per cent. of type instructions gave type perceptions: same with individual instructions. "Sensorial content" of type perception twenty per cent. inferior in detail, accuracy, etc., to that of individual percept. Inferiority remained even where type percept occurred after individual instruction ("inversion"). Assimilation of object to definite memory image caused inversion from type to individual percept: so does complexity or schematic nature of picture: presence of striking details favourable to individual perception. In control experiments number of type and individual perceptions almost equal.] **Charles S. Myers.** 'A Case of Synæsthesia.' [Subject associated colours with musical notes: regular variation of colour tone with rise of pitch. Two simultaneous notes rarely give a mixture of colours, more often a suggestion of two colours. Voices also "coloured". Colours vary with timbre and also with loudness of sounds, and depend partly on colour of preceding pitch, a kind of contrast of effect being obtained. Colours not visualised but only names thought of. Associations unaffected by perception of an actual colour when note is sounded. 'Higher' colours may be ascribed to higher sounds without awareness of the change of pitch: and two colours may be thought of even when presence of the two tones is not detected. Origin of synæsthesia referred to primitive stage in differentiation of sensations. Subject also associated numbers with letters. Various cases of synæsthesia shown to have general but not detailed resemblance. Vol. iv. Pts. 3 and 4. **S. Alexander.** 'Foundations and Sketch-plan of a Conational Psychology. [Excludes all presentations from the scope of psychology, which is the science of the art of experiencing. Objects as perceived or imagined are non-mental ("contemplated objects") and form the subject matter of the physical sciences. The term "enjoyments" is applied to purely mental experiences. Thus both Ward's tripartite and Stout's (later) bipartite division of the mind are rejected, and mental life is confined to conation, with feeling as a qualification of conation. Conation may be (1) "practical," when we seek to alter some object, or its relation to ourselves or to other objects, or (2) "theoretical," as in attention, though there is no sharp division between the two forms. Both forms may be either receptive or active; and each form is both sensory and motor. "Practical" activity not synonymous with attention to movements of the body: for sensations of movement also belong to the world of "objects contemplated," not to "enjoyments". This fundamental change in the analysis of consciousness only involves *rearrangement* of much of modern psychology, not its abandonment. Distinctions between sensory conations may require reference to objects sensed; but probably there are differences of a spatial nature and of direction which are actually "enjoyed". Perception is instinctive or impulsive conation, the mental act by which the ideal elements involved in a percept are revealed, these elements themselves, however, being objective and non-mental. When this tied or qualifying conative tendency (involved in perception) becomes independent we get reproductive conation, the object now being an image. The practical form of this form of conation is "appetition". Desire is the practical form

of the conation involved in expecting and remembering; aversion corresponds to the theoretical form found in forgetting. Voluntary conation and thinking are again the same kind of conation, the object being a proposition. We do not will a state of the self or even a movement, but some "matter of fact". Author points out that difficult subject of feeling remains to be discussed.] **A. R. Abelson.** "The Measurement of Mental Ability of 'Backward' Children." [Subjects were the least abnormal children between ages of eight and sixteen, in schools for mentally defectives. Tests used, tapping, crossing out rings, memory for commissions, other memory tests, interpretation of pictures, tests with intermingled geometrical figures, etc.; teachers astonished at general ability of children to perform most tests, but arranging cartridges in order of weight quite beyond most of the children. Inter-correlation co-efficients remarkably alike, especially with girls. Theory of a "common factor" corroborated, intellectual rather than conative: deficiency possibly consists generally in lack of "clear awareness". No simple test gives reliable guide as to intelligence, but all the tests pooled give co-efficient of 0·9 with the girls and 0·87 with boys, and give much better clue as to true intelligence than do teachers' estimates of "practical intelligence". Correlations tend to increase with repetition of tests, *i.e.* more intelligent children improve more with practice than do the others. Reading and arithmetic discredited as adequate tests of general intelligence. Practical intelligence seems to increase during ages eight to sixteen. Author also concludes (1) that prevalent methods of examining mental deficiency are inadequate; (2) that apparent intellectuality of a performance may be very misleading, *e.g.* tapping test proved to be as valuable a test as interpretation of pictures; (3) that with backward children it is better to use some tests for all ages and allow for age rather than use different Tests for different ages (*cf.* Binet's).] **W. H. Winch.** 'Mental Fatigue in Day-school Children as measured by Arithmetical Reasoning.' [Experiments in elementary school with fifty-four Standard IV. boys, average ten and a half years: divided into equal groups on basis of arithmetic problem tests; then group A practised in arithmetical problems in the early morning school hours, group B in same problems in late afternoon; only method of solving problems had to be given, not actual calculations. Group A showed improvement of 18·3 % group, group B of 11·3 %. With a fair proportion of group B the afternoon practice was apparently useless. Similar experiments with girls, average age eleven and a quarter years: those practised in morning improved 14·6 %, afternoon group only 7·9 %. Similar experiments with infants, average age six and a half years. Morning practice produced improvement of 12 %, for group as a whole; group practised at 3·30 P.M. showed no improvement. With Standard VII. boys (average age twelve and three-quarters) morning group improved 7·2 %, afternoon group 4·4 %, so time of day did not make much difference to boys of this age, and greatest effect of afternoon fatigue is shown by the infants.] **Carveth Read.** 'The Function of Relations in Thought.' [Discussion of views of Ribot, Bain, Thomas Brown, Stout, Lloyd Morgan and Spencer. The functioning of relations in reproduction: the work of selective interest and especially of 'dissociation by varying concomitants' in producing originality; relations as abstract ideas, produced by dissociation. Mutual inhibition of ideas may lead to "voluntary condensation"; the metaphor an example of involuntary condensation—a subconscious process. Relations favourable to new combinations, because highly abstract: genius especially sensitive to analogy. Literary illustrations and experimental evidence; subjects asked to complete analogies or comparisons. The relations that are most simply and directly reproductive of ideas similarly related are

those of size. Reaction emphatically not simple association: relational systems may profoundly determine our thoughts without our being conscious of those systems. The genius is able to use past experience, even if not specially attended to, for his purpose in hand; he has more "effective" knowledge than the ordinary man. Illustrations from hypnotic phenomena of work of subconscious impressions. "The revivifying of dormant records by present analogies" is more active in the genius.] **W. G. Sleight.** 'Memory and Formal Training.' [Criticism of experimental work of Neumann, Winch, and Fracker, supporting theory of transference of memory practice. None of these held conclusive owing to defects of method, etc. Author's own experiments dealt with students and with children from three schools. In each school children given memory tests (spot pattern, nonsense syllables, dates, poetry and prose) and divided into four groups of equal capacity. One group then practised with memorising of poetry (Group II), another with tables (Group III.), Group IV. with prose selections, Group I. not practised at all. Then memory tests similar to first given and improvements noted. Those practised in prose (Group IV.) soon came to "saturation point" and other groups eventually did as well as Group IV. in prose tests. Groups II. and III. show marked improvement in (rhythmic) nonsense syllable test but not so Group IV.; this improvement ascribed to common element of rhythm. Practice of students in non-rhythmic tables did not improve memory of nonsense syllables. Practice in "immediate" memory does not improve "prolonged" memory. Improvement in "spot pattern" test in Group III. ascribed to practice in visualisation given by learning of tables (confirmed by introspection of students). Practice in prose learning *lessens* power of mechanical memorising, setting up a feeling of repugnance for it. Conclusions: (1) "Special memory training does not effect a general development in the power to memorise". (ii.) No evidence of a "common factor" which may be improved by memory work of all kinds. (iii.) There are many "related and unrelated memory functions," through which transference of practice effects may be possible; but relation is not necessarily observed by the learner. (iv.) The common elements must be separable from the complexes in which they occur: they are fundamental in nature, *e.g.* attention, imagery, rhythm. (v.) A small change in mode of procedure in learning may hinder transference of practice effect, while change in *material* may have no effect. (vi.) Interference may be produced when mind passes from pleasurable exercise to unpleasant one. (vii.) Effects of "indirect" practice do not last much beyond period when practice ceases.]

Revue de Philosophie. Septembre-Octobre, 1911. A double number on the general subject of Evolutionism in the Moral Sciences. **E. Peillaube.** 'Evolutionism and Human Intelligence.' [Analysis of the process of Abstraction, as it is in man and is not in other animals.] **H. D. Noble.** 'Evolution of Emotions.' **A. Humbert.** 'Evolutionism and the Study of Languages.' **C. Calippe.** 'Social Applications of Darwinism.' [Working of the survival of the fittest in unrestrained commercial competition.] **J. Linard.** 'Primitive Monotheism according to Andrew Lang and William Schmidt.' [Monotheistic beliefs found in the earliest types of living humanity known to us, the natives of South-East Australia and the Pygmies, an argument that monotheism is not a later growth, but the earliest form of religion.] **L. Walker.** 'Evolutionism in the Theory of Knowledge and Truth.' [Pragmatism, the New Realism.' Pragmatism, as a theory of knowledge, is certainly new; and its novelty is, to my mind, the strongest argument

that can be alleged against it.' 'The progress of knowledge does not mean its entire transformation.'] **J. Maritain.** 'The Evolutionism of M. Bergson.' 1er Novembre, 1911. **L. Cristiani.** 'Mental Circulation.' [A new exposition of the laws of association of ideas. Suggestion not the same as Association. Suggestion goes with attention, and maintains homogeneity of thought. Association goes with distraction, and lets in variety.] **R. Marchal.** 'Symbolism and Liberty in Science.' [The concepts of physical science are not as Kantian categories, forms of the mind applied to nature, but stand for real properties of things. A fact does not lose its objectivity by being susceptible of a variety of expressions, or prompting variety of behaviour. These expressions are in correlation, and ultimately point to the same thing. Such liberty as we have is liberty of choice among these various expressions.] **Gomez Izquierdo.** 'The Philosophy of Balmes' [The Infinite. The Moral Order conditioned on the Divine Sanctity, which is God's love of Himself. Origin of Ideas.] 1er Decembre, 1911. **Dr. R. Van der Elst.** 'Supernatural Phenomena and Nervous Phenomena.' [The former, in such persons as St. Teresa, the latter, in such persons as the patients at the Salpêtrière. The former are of the *plus* sign, something superadded to the ordinary powers of healthy nature. The latter are of the *minus* sign, unhealthy, an infringement of nature.] **C. Boucand.** 'Respect for Order and Natural Law.' [A combination of the geometric, or static, with the historical, or dynamic, method of Ethics.] **A. Diès.** 'Critical Review of the History of Ancient Philosophy.' [The principal works reviewed are Markowski on *Libanius's Defence of Socrates*; Gomperz, *Greek Thinkers*, last volume of the French translation, dealing with *Aristotle and His Successors*; Werner on *Aristotle and Platonic Idealism*; Robin on the *Aristotelian Conception of Cause*; Briehier on *Chrysippus the Stoic*; Asmus, annotated German translation of the *Philosophical Works of Julian*; sundry new translations of Aristotle's *Ethics*.] **P. Le Guichaoua.** 'Value and Limits of Knowledge.' [How the object is known in sensation.] 1er Janvier, 1912. **J. Le Rohellec.** 'Individual and Social Morality.' ['God commands the observance of order. Order requires the individual to tend to his last end, to perfect himself and submit his instincts to the empire of reason: hence individual morality. The family is required by order: hence springs domestic morality. Order requires civil society: hence arise the duties of the individual towards society, and of society towards individuals. Order requires above all that both individuals and societies recognise the sovereign dominion of God. Thus individual morality and social morality spring from one and the same source, and run on parallel streams from one and the same principle, which transcends alike the individual and society, and imposes itself irresistibly upon both the one and the other. Thus the alleged conflict disappears.'] **E. Revillout.** 'Equality in Presence of Death in Roman Egypt.' [The contents of a papyrus, dating from about A.D. 100, marked by Christian influences, arguing that in the judgment of the next world there is no respect of persons.] **J. Louis.** 'A Note on the Alleged Fideism of Pascal.' [By 'fideism' is meant a distrust of philosophy, carried so far as to rest all certainty upon the certainty of religious faith. Such fideism has been too hastily attributed to the author of the *Pensées*.] **P. Le Guichaoua.** 'The Value and Limits of Knowledge.' [A scholastic view of Idea, Sensation, Nominalism, Conceptualism, Moderate Realism, Judgment, Truth, Reasoning.] 1er Fevrier, 1912. **A. Bouyssonie.** 'An attempt at a purely *a priori* demonstration of the Existence of God.' [We must recognise in arguments purely *a priori*, in the ontological arguments in particular, a value equal to that of the other proofs of the existence of God. We shall never make of it a popular proof, but that is not

necessary. Let it convince metaphysicians, that is enough.'] **H. Tandière.** 'The State and the Labour Question.' [The situation in France.] **F. Mentré.** 'The Idea of Reason in Cournot.' [The argument from statistics that the course of history is becoming reasonable by degrees.] **M. Sérol.** 'Free Will.' [By the method of introspection, the validity and necessity of which, besides the experimental method, is ably maintained, it is argued that we are, within limits, masters of ourselves. A lucid piece of reasoning, to be read by determinists.] **A. Farges** and **P. Le Guichaoua.** [Discussion of the axiom, that the same action is at once in the agent and in the patient, in its bearing on sen e-perception.] 1er Mars, 1912. **M. de Wulf.** 'Civilisation and Philosophy of the Middle Age.' [Religion was pre-eminent, still philosophy was kept distinct from theology. It was an age of systematisation, and serene confidence in the ability of the human mind to attain truth.] **A. de Sertillanges.** 'Goodness in Interior and Exterior Actions.' [An exposition of the scholastic thesis, that morality is determined by the object, the end, and the circumstances.] **J. Saulze.** 'The Hylszoist Monism of M. le Dantec.' [M. le Dantec says of himself: 'My method consists solely in an ardent faith in universal mechanism. I believe that all facts are susceptible of a mathematical statement.' He will have no final causes, no metaphysics, no theology, a sort of French Haeckel.] **A. Leclère.** 'The Philosophy of the *As If*.' [A review of M. Vaihinger's book with this title, presenting all knowledge as a pure Symbolism, the whole truth of which consists in the speculative or practical success attained by using it.] **M. Sérol.** 'Scientific Studies and Religious Belief.' [The tendency of the former to subvert the latter, not by refuting it, but by superinducing an incompatible mentality.] 1er Avril, 1912. **J. Bonnifay.** 'The *a priori* Demonstration of the Existence of God.' **A. Bouyssonie.** 'Reply to M. Bonnifay.' [Two interesting arguments, one against, the other for, the Anselmic proof. M. Bonnifay assumes that truths of the ideal order are merely hypothetical of the form 'S is P. if S exists.' But it has been maintained that they are categorical, quite independent of the existence of corresponding actualities, and referring to possibilities only. Thereupon Anselmists argue that all perfect Being cannot be contained within the bounds of pure possibility; such Being, if possible at all, must exist. The transition from the ideal to the actual order is valid in this one case of the apex where both meet. Gaunilon's island was an impertinence. The Anselmic Argument is not 'relegated to the number of genial errors,' as M. Bonnifay would have it, nor will be, till Platoism goes there also and higher mathematics.] **H. Colin.** 'The Crisis of Mutationism.' [Difficulties in the way of the 'sudden variations' of De Vries. Apparent new species turn out to be parasitic disease. Speculation on the ancestry of the potato.] **F. de Grandmaison.** 'Neurosis and its Moral Treatment.' [That neurasthenia, hysteria, and 'phobies' are better treated by personal influence and moral suasion than by hypnotism. A practically useful paper.] **M. de Wulf.** 'Currents of Philosophy in the Middle Age.' [Thomism, Scotism, Terminism of Ockham.] **J. Bulliot.** Review of M. Dunan, *Les deux idéalismes*. **Dr. van der Elst** on the cures at Lourdes.

Archives de Psychologie. Tome xi., No. 1. **D. Katzaroff.** 'Contribution à l'étude de la récognition.' [A study of recognition, both from the subjective and from the objective (time, correctness) side. After an analytical statement of the problem, and a review of current theories, the author reports experiments on the recognition of visual forms (for the most part, complicated geometrical patterns). He concludes that the process of recognition comprises two distinct moments:

the feeling of familiarity, which is a direct reaction antecedent to any mode of mental elaboration, and which constitutes direct or pure recognition: and the arousal of memories, which transforms direct into indirect or apperceptive recognition. The feeling of identity is not to be confused with the judgment of identity, which ordinarily comes later; it is also independent both of degree of assurance and of all conscious localisation in time or space. There is no constant difference, subjective or objective, between correct and incorrect recognition; the most that can be said is that the more stable the recognition, the more likely on the whole is it to be correct. There are probably typical differences in the recognitive mechanism. The feeling of familiarity itself is explained by the hypothesis that a sensation, appearing for the first time, is associated to the feeling of self, enveloped by this feeling; when, then, it reappears, it comes with the character of the previously experienced, of something that belongs to the self.] **E. Claparède.** 'Récognition et moïité'. [The theory of recognition outlined at the end of the preceding paper accords closely with that to which the writer had been led by experiments upon a hypnotic subject and a patient afflicted with Korsakoff's disease. Inability to recognise may co-exist with the arousal of associations, with the presence of adaptive reactions, and with the capacity to form habits. We must, then, assume two types of connexion in consciousness: that of idea with idea, and that of idea with the processes constituting the self, the persouality. The feeling of familiarity, of belonging to the self, is the link which joins a memory-image to these self-processes. So we understand why loss of recognition usually brings with it loss of the power of voluntary recall; a voluntary act is an act whose determination implies the intervention of these same self-processes. An appendix reports cases of recognition in despite of inaccuracies in the memory-image of a visual perception.] **H. Preisig.** 'Notes sur le langage chez les aliénés'. [Neologisms appear in the speech of the insane under very various conditions. Certain hallucinations and ideas of delirium require the neologism for their adequate expression. The novel words may be due, further, to exuberance of imagination (paranoidal dementia, general paralysis, mania); to symbolism, confusion by external resemblance, and imprecision of ideas (*dementia præcox*); to affectation and mannerism (*dementia præcox*, epilepsy, imbecility); to change of words by defective articulation, or defective memory in writing (general paralysis); to condensation (*dementia præcox*); and to contagion. There are obvious analogies here to factors which have been at work in the normal evolution of language.] Recueil de faits: documents et discussions. **E. Claparède.** 'L'abréviation des titres des publications périodiques.' [Suggests rules; criticises the proposals of Lipmann.] Bibliographie. Notes diverses. Tome xi., No. 2. **J. Varendonck.** 'Les témoignages d'enfants dans un procès retentissant'. [A man of thirty-six, married, the father of three children, a steady workman, of good standing in his community, is charged on the testimony of ten-year-old children with the rape and murder of a girl of nine. Public and judicial opinion is strongly against him; but his counsel fortunately calls the writer of this paper as expert witness to the value of children's evidence. The paper opens with a newspaper article, which introduces the reader to the case; then follows the author's full report, based on experimental work in his school and on an analysis of the incriminating testimony—which collapses so completely that the whole affair would be ludicrous had not a man's life been at stake.] **E. Cramaussel.** 'Le sommeil d'un petit enfant; nouvelles observations.' [Gives the results of observations from the beginning of the fourth to the end of the sixth month; similar observations, to the end of the

third month, were reported in vol. x. Characteristic curves are figured for the onset, mid-period, and lightening of sleep. Sleep under various forms of stimulation shows various types of breathing curve, which are distinguished as tranquil, strained, depressed or fatigued, and sensitive or emotive. Stimulation by odours seems to show that there is affective consciousness in sleep, but of an obtuse, sluggish and circumscribed kind. Thers is no evidence of dreaming, or of any play of ideas; on the other hand, ideas are not far off; for there are signs of adaptation of the attention, and of something like 'mental work'.] **A. Chojechi.** 'Contribution à l'étude de la suggestibilité.' [Tests by aid of Guidi's warming box, Ochorowicz' hypnoscope, and Binet's progressive lines. There is no correlation between the three forms of suggestibility. On the other hand, there is inverse correlation of suggestibility (Binet) and accuracy in the cancellation test; hence it is probable that sustained attention plays a certain part in the test with lines. Fewer women than men are suggestible by the Binet test, but the degree of their suggestibility is greater.] Recueil de faits: documents et discussions. **F. U. Saffiotti.** 'Rapport sur le laboratoire de psychologie pure et appliquée de la ville de Milan pendant la direction de M. le Prof. Z. Treves (1 Mars, 1908—28 Avril, 1911).' [Historical sketch, equipment, teaching, research; a tribute to the memory of M. Treves, whose untimely death is a heavy loss to experimental psychology.] **A. Elmer.** 'VIII^e Conférence suisse pour l'éducation des anormaux (Berne, 1911).' **E. Lombard.** 'Questionnaire sur le langage dans le rêve.' Bibliographie. **E. Claparède.** Psychopédologie et Pédagogie, i. Tome xi., No. 3. **W. Radecki.** 'Recherches expérimentales sur les phénomènes psychoélectriques.' [After a full account of previous work on the psychogalvanic reflex, the author describes experiments of his own, made with galvanometer and battery, and with capillary electrometer. His conclusions are as follow. (1) *Physical.* Under certain kinds of mental stimulation, there is change in the total conductivity of the human body for an exosomatic current; the stimuli used nearly always produced an enhancement of conductivity. Various forms of mental stimulation produce also static changes of electrical potential at the surface of the skin; no law can be made out as to the direction or amount of these changes. (2) *Physiological.* The changes in conductivity are caused by modifications of gaseous exchange, which depends directly upon modifications of circulation (in the case of mental stimulation, upon vasomotor modifications). The changes of potential result from the release of electricity which occurs during glandular activity; they thus depend directly upon secretory and excretory processes. The two modes of physiological function here described may exert reciprocal influence, so that either may be the indirect cause of a physical phenomenon depending directly upon the other. (3) *Psychological.* The psychoelectric reaction is valuable as an objective indication of the degree in which an emotive factor is bound up with mental stimulation, with the presence of image, idea or thought. It is extremely sensitive, and in so far superior to sphygmograph, plethysmograph, etc. Unfortunately, it has no comparative value; individual differences of reactivity are enormous; so that its differential function is restricted to successive states of one and the same observer. In an appendix the author remarks that his results are in substantial agreement with those of the independent investigation of Wells and Forbes.] Recueil de faits: documents et discussions. **C. Werner.** 'VI^e Réunion des philosophes de la suisse romande, Rolle, 22 Juin, 1911.' Bibliographie.

ARCHIV F. D. GESAMTE PSYCHOLOGIE. Bd. XX., Heft 3. **C. Minnemann.** 'Untersuchungen über die Differenz der Wahrnehmungsgeschwindigkeiten von Licht- und Schallreizen. i. Theoretische Erörterungen über die Differenz von Wahrnehmungsgeschwindigkeiten.' [This introductory paper, which deals with questions of terminology and theory, outlines what may be called an empirical attitude to psychological time, and defends it against Wundt's doctrine of apperception. Rate of perception is measured by the time which elapses between the incidence of sensory stimulus upon sense-organ and its coming to consciousness (*erstes Bewusstwerden*); the phrase is therefore indifferent; we may speak, as we prefer, either of *Wahrnehmung* or of *Auffassung*. Temporal displacement consists simply in a discrepancy between the subjective temporal arrangement of sensations and the objective temporal sequence of stimuli. We must according recognise, first, that the adjective 'positive' and 'negative' are relative only, referring to a delay of perception that is less or greater than the delay of the perception chosen (for convenience) as norm; and, secondly, that the displacement, as a deviation of the subjective temporal series, is always to be measured on the subjective side: failure to regard these principles has led to great confusion. Subjective simultaneity is represented not by a point but by a period or zone of time. Theoretically, this extension must be considered as an immediate fact of consciousness. Practically, it determines our comparison of rates of perception: if, *e.g.*, we lay the two zones for the time-orders light-sound, sound-light end to end, and find the middle point of the total zone, the distance (positive or negative) of this middle point from the zero point of displacement gives the average difference of rate of perception.] 'ii. Bisheriger Stand der Untersuchungen über die Wahrnehmungsgeschwindigkeit von Licht- und Schallreizen.' [Review of work done by the methods of reaction, of direct comparison of two sense-impressions, and of complication. The harvest of assured results has been scanty. Reactions seem to show that sound is apprehended more quickly than light; and that, in favourable cases, the rate of perception is less than 100°; but there are critical doubts. Repetition appears to favour the sound, both in the direct comparison of sound and light, and in complication experiments. Practice, in these latter experiments, seems mainly to affect the visual process.] 'iii. Experimentelle Untersuchung über die Wahrnehmungsgeschwindigkeit von Licht- und Schallreizen, nach der Methode direkter Vergleichung.' [Description of apparatus; determination of physical latencies; results. There is no constant difference in the rate of perception of sight and sound. Usually, sound is preferred; but the result depends upon circumstances, chief among which are stage of practice, and intensity and duration of stimuli. Precision of temporal apprehension (expressed in the width of the zone of simultaneity) depends largely upon practice; also upon intensity and duration of stimuli. Quality appears to operate by way of the correlated intensity or duration. All these are objective factors: the test of subjective factors is reserved for a later paper, which will deal with the temporal apprehension of stimuli chosen from the same sense-department. The uniformity of the present results suggests that the same laws may hold for the rate of perception of isolated stimuli.] Literaturbericht. Einzelbesprechungen. [Huther on Klages, *Prinzipien der Charakterologie*; Treves on Weiler, *Untersuchungen über die Muskelarbeit des Menschen: i. Messung der Muskelkraft und Muskelarbeit.*] Referate. Bd. xx. Heft 4. **V. Benussi.** 'Über die Motive der Scheinkörperlichkeit bei umkehrbaren Zeichnungen.' [If the appearance of tridimensionality is due to associative factors (*e.g.*, the look of stability), then

different positions of a given figure should give reaction times, for this appearance, of uniformly different lengths. The times do, in fact, differ widely for the different positions; but their course forbids exclusive interpretation either by association and assimilation or by Wundt's fixation-hypothesis. Putting together objective and introspective results, the writer theorises as follows. There are ideas that are independent of stimulus (*reizfrei*), such as those of musical interval and of spatial form; and there are ideas that are dependent on stimulus (*reizgebunden*), such as those of tone and colour. In the present case we set out from an idea of the second sort (the black and white of the figure), and rise to an idea of the first sort (tridimensionality). How is the passage mediated? By way of the intermediate idea of a bidimensional form, which then brings up associatively the idea of corporeality. Details are reserved for a further paper.] **Hauptmann Meyer.** 'Experimentelle Analyse psychischer Vorgange beim Schiessen mit der Handfeuerwaffe: ein Versuch.' [Introspective account of the experiences involved in raising the gun to the shoulder, aiming, and firing; difficulties encountered in the training of recruits; suggestion that the methods of experimental psychology be applied to their analysis and removal.] **G. Anschuetz.** 'Über die Methoden der Psychologie.' [An introductory section discusses the nature of scientific investigation at large; the difference between method and procedure, between law and rule; the inadequacy of subsumption of particular facts to concepts; the nature (objective and subjective) of presuppositions. The direct method of psychology is introspection. We cannot introspect a present experience; but we are not confined to memory; introspection is a temporal process, during which fragments of the experience are actualised once more, and thus grasped directly. Systematic introspection is inductive; but it differs from the induction of physics in its non-causal character and in its requirement of a large number of instances. It also involves reduction, *i.e.*, the reference of particular to general facts. A psychological phenomenology thus has at its command description and analysis, interpretation and reduction, all based upon the direct introspective experience. Yet, for exact research, an objective control is necessary; and this is found in the indirect method of experiment, first the psychophysical, and then the strictly psychological, which permits of recourse to the principle of variation, and allows a clear formulation and delimitation of problems, and a precise mode of instruction. Auxiliary methods are found, lastly, in child psychology, psychopathology, social psychology and animal psychology.] Literaturbericht. Einzelbesprechung. [Urban on Brown, *The Judgment of Difference with Special Reference to the Doctrine of the Threshold in the Case of Lifted Weights.*] Referate. Bd. xxi., Heft 1, bis 3. **F. Hacker.** 'Systematische Traumbeobachtungen mit besonderer Berücksichtigung der Gedanken.' [A study based, in the main, on the writer's observations of his own dreams during 450 consecutive nights. Dreaming is characterised (in varying degree, according to the depth of sleep) by retrogression of the mental 'functions'; self-consciousness lapses, reasoning and true volition are in abeyance, attention is both weak and instable, and consciousness lacks the guidance of determining tendency. It follows that all available psychophysical energy is at the service of ideas; and these, since they appear in a world of space and show no dependence on the will, are realised, under the regular conditions of the dream, as perceptions. The principal difference between waking and dreaming is then twofold. (1) In the dream, there is disassociation of perception and meaning, of 'idea' and 'thought'; ideas occur without accompaniment of meaning, or (as is especially frequent with verbal ideas) with a meaning

foreign to that of waking experience. (2) The course of ideas is undirected : some particular idea stands out, and forms the centre of a constellation ; the scene thus composed gives place, associatively, to another ; and so on. There is rarely any continuity from scene to scene ; thought in light sleep an invading sensation or idea may have a retroactive effect, and may thereby produce the illusion of continuous development. Feelings, which like meanings are curiously independent of the ideas which they accompany, seem to be due for the most part to sensations of temperature and organic disturbances. External stimuli have a relatively slight influence ; they merely modify the existing constellation ; the usual origin of dreams is central, and not peripheral. A dream may last for 10 min. or more, though as a rule it is shorter. The first dreams of a night derive their material from the dream-day ; those of deeper sleep from more remote experiences ; morning-dreams from the dreamer's professional occupation. The author's results do not accord with the views of Freud.] **R. Pauli.** 'Über die Beurteilung der Zeitordnung von optischen Reizen, in Anschluss an eine von E. Mach beobachtete Farbenerscheinung.' [Mach observed that if two red squares are illuminated, in the dark room, by an electric spark, the square directly seen looks red, while that seen in indirect vision looks green ; and he explains the observation by the delay of attention to the second stimulus. To test this explanation, the author undertakes a systematic study of the conditions, peripheral and central, of our judgment of the temporal order of visual impressions. He finds—to come at once to the main point—that simple concentration of attention upon the one of two given stimuli leads to no temporal illusion ; but that the exclusive consideration of a particular temporal relation (*e.g.*, 'Left first !') produces an illusion which varies, with circumstances, from $\frac{1}{20}$ to $\frac{1}{10}$ sec. This temporal displacement cannot be ascribed to change of sensation, to shift of attention,—both implied by Mach's theory,—or to eye-movement : it is due rather to the mode of activity of the 'functions' which are directed upon the sensations, the functions of attention (degree and time order of apperception of stimuli) and of temporal apprehension (tendency of judgment). Mach's phenomenon, as is shown by its conditions (elimination of contrast, indirect vision, stimulus of not too brief duration), simply illustrates certain laws of colour vision with the peripheral retina.] **E. Westphal.** 'Über Haupt - und Nebenaufgaben bei Reaktionsversuchen.' [We usually read a scientific work with a definite aim in view ; but the dominance of this aim does not prevent our taking account of outlying features and references ; we are not obliged to reread, if we desire to utilise the work in a different way ; in short, our reading is controlled by a sort of hierarchy of purposes. The present paper is an elaborate study (over 200 pp.) of the combination of purposes in a particular, fairly simple case. The observer reacts to a complex visual stimulus, an irregular polygon, which varies in two ways : in number of angles, and in position of the longest side. First of all, three series are taken under the simple instructions : (1) A polygon will be shown ; you are to note the number of its angles, (2) its longest side, (3) the number of angles and the longest side. The next two series involve subordination without specialised form of instruction ; (4) You are primarily to note the number of angles, and secondarily the longest side, or (5) conversely. The results lead to the discrimination of various forms of subordination, which are then synthetised in further experimental series. Thus it appears (*a*) that the instruction may be obeyed, the set task accomplished, at different levels of consciousness (*Bewusstseinsstufen*) : the observer may report an explicit identification (*Konstatieren*), a potential knowledge on the basis of observation

(*Beachten*), mere conscious presentation, and guesswork or inference. Instructions are therefore given (6) to identify both aspects of the stimulus, (7), (8) to identify the one and to observe (*Beachten*) the other, and (9), (10) to observe the one, while the other is simply given in consciousness. It appears (*b*) that the instruction renders the one task materially (as distinct from formally) dependent upon the other; the synthetic experiment accordingly prescribes: (11) You are to note number of angles and longest side; but this side is to determine the figure; the others are just to group about it. Lastly, it appears (*c*) that the order in which the twofold task is performed is merely an indication of subordination; and the synthetic experiment (12) with predetermination of the order of performance confirms this result; a given order is compatible both with absence of subordination and with subordination of either task to the other.—Such is the course of the investigation. In brief sum, a 'subordination,' that is, the establishment of a hierarchy of purposes, consists in the observer's intentional adherence to some 'structure' which has taken shape in the period of practice. A 'structure' is a mode of procedure which is characterised in experience by certain formal features: the 'level of consciousness' at which the separate individual contents are given, and the order of succession in which the part-tasks are performed. (The term *Bewusstseinsstufe* is perhaps unfortunate; at any rate, it must be understood to refer to the observer's attitude or functional relation to the object of perception; 'level of consciousness' means 'level at which the cognitive function is working'.) These two formal moments of structure, together with a material dependence of the secondary upon the primary task (in Series 5, *e.g.*, the longest side might stand out sharply and at once, while the impression of the total figure was extremely indefinite), are the principal distinguishing marks of a subordination.] **E. Leschke.** 'Die körperlichen Begleiterscheinungen seelischer Vorgänge.' [Critical review of E. Weber, Der Einfluss psychischer Vorgänge auf den Körper, 1910, with analytical table showing the results of eleven investigations.] **J. Rieffert.** 'Bericht über den IV. internationalen Kongress für Philosophie zu Bologna vom 6-11 April, 1911, insbesondere die psychologische Sektion.' Bd. xxi., Heft 4. **V. Rakic.** 'Gedanken über Erziehung durch Spiel und Kunst.' [Vital organisation rests upon the balanced interplay of two fundamental forces or capacities, the capacity to *repeat* and the capacity to *change* reactions. The former has normally a certain advantage (instinct, vegetative functions), which it seeks unduly to increase; since, however, its nature is to divide into local and special forces, it may be met successfully by a temporary concentration of the capacity to change, which itself is, on the contrary, a general, outwardly undifferentiated, motile force. The two capacities are thus antagonistic, while yet the atrophy of either one means the atrophy of the other; a due proportion must be observed; and we find, in fact, all sorts of regulations in life that make for its observance. These will naturally appear either as restriction of repetitions or as increased opportunity for variation. Under the former head fall sensory adaptation, fatigue, tedium, the tendency to reduce to minimal and schematic terms what must perforce be repeated (mechanisation, abstraction, conventionalisation), and the tendency to close routine chapters (vegetative functions; 'dropping the shop'). Under the latter head fall, from different points of view, sport, recreation, fêtes, appetisers and stimulants, sexual reproduction, and more especially play (games of imitation and of combat) and art. These activities refine and point the sensory, motor and intellectual functions; augment the strength and resistance of the psychophysical organisation; and bring with them an enhanced bodily and

mental adaptability. Or, more technically, the two activities, in so far as they include an element of conflict, develop the formative processes of will; excluding this element, they develop the functional processes of intellect; in both forms, they develop the nutritive processes of feeling. The author, on this basis, shows the value of art and play for education. Appendices deal with theories of play, and with the biological evidence for the writer's view. A bibliography is added.] **E. Weber.** 'Bemerkung zu der Abhandlung "Die körperlichen Begleiterscheinungen seelischer Vorgänge".' **E. Leschke.** 'Erwiderung auf obige Bemerkung von Ernst Weber zu meiner Abhandlung "Die körperlichen Begleiterscheinungen seelischer Vorgänge".' Literaturbericht. **N. Braunshausen.** 'Eine Krisis in der experimentellen Psychologie?' [Review of N. Kostyleff, *La crise de la psychologie expérimentale*; general account of the status and promise of experimental psychology.] Referate. Bd. xxii., Heft 2 und 3. **A. Messer.** 'Husserl's Phänomenologie in ihrem Verhältnis zur Psychologie'. [Husserl's criticism of psychology, in part anticipated by psychologists themselves, holds rather of the provisional or the extreme in current research than of the science as a whole. His phenomenology, though he separates it sharply from psychology, is actually the basal or descriptive portion of psychology, distinguishable only from explanatory and physiological psychology; it has, as he affirms, a special importance for theory of knowledge.] **A. Kronfeld.** 'Ueber die psychologischen Theorien Freuds und verwandte Anschauungen; Systematik und kritische Erörterung.' [Exposition and criticism, in detail, of Freud's system of psychology, *i.e.* of the psychological principles, elements, mechanisms, inductions upon which the more popular applications of Freudism rest. The author commends the tendency of the school to push psychological and psychopathological analysis to its uttermost individual limits; and he recognises, with unstinted admiration, the subtle psychological intuition of Freud himself. The system, however, considered logically and pschologically as system, is indefensible. The doctrines of Bleuler and Jung differ, in many as yet unmediated ways, from Freud's principles; the theory of the 'complex' (here the writer differs from Isserlin) is a valuable contribution to psychiatry, though the interpretation put upon it by the Zurich school is not acceptable.] **R. Pettow.** 'Zur Psychologie der Transvestie: zugleich ein Beitrag zur reform des § 51 St. G. B.' [Discussion of the impulse, by one who is himself subject to it, to adopt permanently or periodically the clothing of the opposite sex or to return to that of childhood. Careful distinction must be made between the imperative or genuine impulse, with psychical transformation, and a mere leaning or inclination (permanent or temporary) which involves no such psychosis. Proposed alteration of the law that deals with discovered cases: illustrations.] **E. Rignano.** 'Von der Aufmerksamkeit. I. Affektiver Widerstreit und Einheit des Bewusstseins'. [Attention arises phylogenetically with the distance-receptors, and consists in the opposition of two affective tendencies, a primary tendency called out by the object and a secondary, called out by the primary which holds this latter in suspense. The 'becoming conscious' of a past state of mind depends upon the complete or partial identity of its affective constituent with that of a present mental state; and the unity of consciousness simply expresses the fact that the simultaneous release of independent affective tendencies is impossible: in attention, e.g., there is and can be but one primary tendency. Attention is thus a sufficient, but not the sole condition of 'consciousness'; an affective tendency may work itself out unimpeded. Conversely a stimulus may reach the sensorium, and yet (if attention is elsewhere; if no affective tendency is aroused) may remain unconscious.]

'Von der Aufmerksamkeit.—II. Vividität und Zusammenhang.' [The intensity of a sensation belongs to its specificity; its vividness is a matter of the active quantum of nervous energy whereby the sensation (or idea) is formed. Vividness, in attention, thus depends upon a number of conditions: adaptation of the sense organ, mnemonic summation, affective facilitation, and finally direct affective intensification or dynamogeny. The interconnexion of ideas in attention is, negatively, a matter of inhibition; counter affective tendencies are directly inhibited, and foreign sensations, though they reach the sensorium, are thus excluded from consciousness. Positively, we have an affective selection among the available unconscious processes, and also a direct excitation of sensory elements by way of the primary affective tendency.] **W. Moede.** 'Gedächtnis in Psychologie, Physiologie und Biologie: kritische Beiträge zum Gedächtnisproblem.' [Current scientific thinking is dominated by the principle of economy, so that there is a strong trend towards monism: logic reduces the table of categories to the single law of identity, psychology becomes sensationalism, natural science relies on energy, the sciences of life and mind on evolution. So the concept of memory, which belongs primarily to psychology, has been extended first to the organic, and then even to the inorganic worlds. Is the extension justified? To answer this question, the author reviews the psychology of memory (perception and recollection, association, memory); then passes by way of 'persistence' (*Nachwirken*), the alleged fundamental fact of memory phenomena, to the use of memory in physiology and biology; discusses the doctrine of causation in biology; and finally outlines the resulting metaphysics, the *mnemisch-Weltbild*. His conclusion is unfavourable to Hering and Semon. (The article, nearly 80 pp. long, is full of interesting details, critical and expository; it is, however, written in an aphoristic style which makes a summary impossible.)] **M. Ponzo.** 'Ueber einen neuen Zirkel für die Bestimmung der simultanen Raumschwellen der Korpernaut.' [An æsthesiometer which avoids the errors of unlike pressure and successive application of the points, at the same time that it allows of variation of degree of pressure.] **R. Hildebrand von Renauld.** 'Zur Psychologie eines Sprichworts (Geteilte Freude ist doppelte Freude; geteilter Schmerz ist halber Schmerz); eine psychologische Studie.' [If communicated pleasure is, by reflected empathy, doubled pleasure, the communication of sad news should—and does—similarly increase the sorrow. But some pleasures are oppressive; and their communication is a relief, not an enhanced pleasure. Finally the pleasures of others are often grudged, and their sorrows enjoyed.] **G. E. Muellet** 'Gesellschaft für experimentelle Psychologie'. Literaturbericht.

ZEITSCHRIFT FÜR PSYCHOLOGIE. Bd. lx., Heft 1 und 2. **K. Groos.** 'Untersuchungen über den Aufbau der Systeme. IV. Die Behandlung kantischer Dualismen durch die unmittelbaren Nachfolger Kants.' [The present instalment (see MIND, xviii., 481; xix., 144, 604) discusses, with post-Kantian illustrations, the typical ways in which a dualism may be overcome. In radical solution the one member of the antithesis is simply stricken out (Jacobi, the philosophy of immanence). Monistic solutions assume a unity which embraces the terms of the original dualism; they may be static (Reinhold) or genetic (Schiller). Solutions by interpolation may also be either static (Schiller) or genetic (Reinhold). The Leibnizian solution (Maimon) makes the two terms extreme points on a vertical scale, the one representing the infinitely weak degree of the other. The relativist (Schleiermacher) asserts that the opposing terms really imply each other. The paradoxical solution (Hamann) cuts the difficulty, by offering a new doctrine in place of the proposed dualism.]

A. Prandtl. 'Experimente über den Eingluss von gefünlsbetonten Bewusstseinslagen auf Lesezeit und Betonung.' [Serious or impassioned (*bewegte*) passages of prose writing are read more slowly than cheerful or quiet; and the difference is not attributable simply to difference of the average length of the words employed. Passages of the former kinds also receive more frequent emphasis, which again is more than a matter of word-length. Finally, these passages are read with more frequent and longer pauses; but when the blank times are allowed for, their reading is still, on the average, slower.] **I. Grassi.** 'Einfache Reaktionszeit und Einstellung der Aufmerksamkeit; experimentelle Untersuchungen.' [After an historical survey of the factors which are known to influence the duration of the simple reaction, the writer describes three sets of sensorial reactions to touch: with stimulus applied always to the same spot, with place of stimulation changed in every experiment, and with change of place after a certain number of stimulations of the same spot. The 'reactions of transition' in the last series are longer than the reactions taken with an identical position of stimulus; and since the result cannot be due either to practice or to a difference in the observer's expectation, it must express the time required for a change of direction of attention. The fact that the reactions of the second series are on face and forearm shorter, on back and leg longer, than the reactions of transition in the third series, is explained by the difference of localising sensitivity; stimulations at different parts of back and leg are referred to the same general region of cutaneous space.] **W. Sternberg.** 'Die Physiologie der Kitzelgefühle.' [Discusses, with much literary quotation and many appeals to comparative philology, the conditions for the arousal of tickling; the relation of tickling to itching, creeping, tingling, pricking, scratching, etc. (all these 'feelings' are, the author thinks, fundamentally the same; they differ only in intensity); the modes of relieving ticklishness,—pressing, rubbing, scraping, scratching; and the particular forms which the feeling assumes in appetite for food, need of evacuation, the itch of lust. Medical practice errs both in separating the terms of a single group of 'affective sensations,' and also in regarding their occurrence as pathological. Experimental psychology has much to learn from comparative zoology, from veterinary medicine, and above all from the comparative study of language.] Besprechungen. Paul on Marty, *Zur Sprachphilosophie;* Marbe on Dürr, *Erkenntnistheorie;* Cohn on Volkelt, *System der Aesthetik*, ii.; Henning on Flournoy, *Esprits et médiums.* Literaturbericht.

Scientia. Rivista di Scienza. Vol. xi., 1912. No. xxi. **F. Enriques.** 'Matematiche e teoria della conoscenza' [Historical sketch of the development of the problems belonging to the common domain of mathematics and the theory of knowledge, from the times of the Pythagoreans to the logical current and the psychological current in contemporary thought. After the present reaction against scientific philosophy has died down, and when the long labour of critical researches and of analyses has engendered a loftier impetus of the philosophical conscience, will appear to the eyes of all the necessity for philosophy again to take its position on the ground of science, as it did at the great constructive epochs of thought.] **T. J. J. See.** 'The New Science of Cosmogony'. [Sketch of the new epoch in astronomy which began with the photographic work of Keeler in 1889, and with the work of Darwin, Poincaré, Arrhenius and Strömgren, and which is thus made possible, partly by the perfection of astronomical photography, and partly by the solution of the restricted problem of three bodies. This leads at once to a great increase in our knowledge of the nebulæ and of their mode of development into cos-

mical systems, under laws which are demonstrated to be consistent with the established principles of the mechanics of the heavens.] **J. W. Gregory.** 'The Structural and Petrographic Classifications of Coast-types.' [A geological paper.] **E. Rignano.** 'Dell' attenzione. 2a parte: Vividità e connessione' [A continuation of previous researches. The present part contains an examination of the effects which, for sensations, images and ideas, result from the intimate nature of affective contrast and from the fundamental characteristics of unity of consciousness which belong to attention. These effects may be summed up in the two words: *vividity* and *connection*. Further researches are announced.] **M. Hoernes.** 'Ursprung und älteste Formen der menschlichen Bekleidung.' [Discussion of the theories with regard to the origin of clothing, which depend on "practical" or "ideal" (prehistoric prudery) exigencies. We must be careful not to lay stress exclusively on such and such particular motive and to make deductive conclusions according to the customs of primitive people of our days. The results will only have value in the measure that account is taken of all possible motives.] **A. H. Sayce.** 'The Laws of Babylonia.' **E. Goblot,** 'Le concept et l'idée' [A discussion of the *denotation* and *connotation* of names, in which, however, the advances made in modern logic are not dealt with. In the treatment of ideas M. Goblot does not in all respects go as far as Plato.] Book reviews. General reviews. [Critical article by **F. Savorgnan.** on various anthropo-sociological articles, under the title 'La race'.] Review of reviews. Chronicle. French translations of the German, English and Italian articles.

Zeitschrift für Philosophie und Philosophische Kritik. Bd. cxliv., Heft 1. **A. Döring.** 'Zur Parmenides und Zeno von Elea.' **A. Lewkowitz.** 'Die Religionsphilosophie des Neukantianismus.' **Hans Klasen.** 'Die Ideen Gott, Unsterbliehkeit und Freiheit bei Schiller.' **P. Schwartzkopff.** 'Ein Beitrag zur principiellen Beurteilung des neutigen Monisums.' Rezensionen, etc.—Bd. cxliv., Heft 2. **H. Schwarz.** 'Zum 60 Geburtstage Richard Falckenberg.' **Johannes Rehmke.** 'Anmerkung zur Grundwissenschaft.' **H. Aschenasy.** 'Grundlinien zu einer Phänomenologie der Musik (Schluss).' **O. Braun.** 'Herders Kulturphilosophie.' Rezensionen, etc.—Bd. cxlv., Heft 1. **Otto Braun.** 'Herders Kulturphilosophie (Schluss).' **H. Siebeck.** 'Über Monismus und Dualismus.' **H. Schoen.** 'Heinrich Bergsons philosophische Anschauungen.' Rezensionen, etc.—Bd. cxlv., Heft 2. **Felix Somlo.** 'Das Werthproblem.' **Johannes Rehmke.** 'Anmerkungen zur Grundwissenschaft.'—II. Rezensionen, etc.—Bd. cxlvi., Heft 1. **Hans Schmidkunz.** 'Grundzüge einer Lehre von der logischen Evidenz.' **Felix Somlo.** 'Das Werthproblem (Schluss).' **W. Kinkel.** 'Literaturbericht.' Rezensionen, etc.

Rivista di Filosofica. November-December, 1911. Anno iii. Fasc. 5. **Benvenuto Donati.** 'Dottrina Pitagorica e Aristolelica della Giustizia.' [Endeavours to establish a connexion between Aristotle's theory of justice and the Pythagorean philosophy of numbers as stated in a fragment of Archytas, with copious reference also to the theories of Hippodamus of Miletus. The article occupies more than half the present number of the *Rivista* and is more than three times as long as the Fifth Book of Aristotle's Ethics.] **Paolo Rotta.** 'Ancora della Filosofia di Federico Paulsen.' [Paulsen's system is an illogical compromise between physical science and ideal philosophy whose failure is due to his having attacked the problem of existence before solving the problem of knowledge.] **Pietro Ragnisco.** 'La Cavatteristica della Filosofia Italiana.'

[Just as English philosophy since the Middle Ages has been utilitarian and German philosophy since the Reformation idealistic, so Italy would find salvation by returning to the calm naturalism of the Renaissance.] **L. M. Billia.** 'Rompicapi del *Parmenide* e la tragedia del Pensiero.' [A discussion on the meaning of predication as illustrated by Plato's *Parmenides*, concluding with the very questionable assertion that 'we have to choose between Absolute Egoism and Mysticism; and perhaps Mysticism is the sole, the true, and the only (*sic*) philosophy'.] **Ferdinando Belloni-Filippi.** 'E il Buddhismo ma Religione o una Filosofia?' [As a working definition of religion this writer proposes: the recognition of intelligent supersensible forces as objects of hope or fear, adored and invoked to prevent evils or to obtain favours; and, so understood, he insists that Buddhism is a religion.] **A. Faggi.** 'Un moralista dimenticato.' [The forgotten moralist in question published an ethical treatise in three thick volumes in 1878, and the sole reason for reviving his memory seems to be that, writing in Italy so long ago he fearlessly based morality on pure reason.] Recensioni, etc. Anno iv., Fasc. 2. March-April, 1912. **Guiseppe Zuccanta.** 'I Cirenaici.' [Relates the well-known story of how the hedonism of Aristippus turned into the pessimism of Hegesias.] **Franz Weiss.** 'Il pensiero di Giambattista Vico.' [While praising Croce's recent book on Vico, the writer complains that it does not bring out the debt of modern Biblical criticism to the *Scienza Nuova*.] **Michele Losacco.** 'La filosofia dell' organismo.' [Claims, as against Driesch, the whole world of consciousness as, still more than biology, fit for the application of the teleological method.] **Vittorio Machioro.** 'La ricerca del simbolo nelle arti figurative.' [The writer recommends his own symbolism in preference to all others.] **Luigi Visconti.** 'Evoluzione e Dissoluzione della Coscienza religiosa.' [Religion, being a synthesis of all men's spiritual powers in presence of the problems of destiny, cannot conceivably disappear from the world.] **Alessandro Bonucci.** 'Libertà di volere e Libertà politica.' [Against State socialism.] Recensioni, Notizie, etc.

IX.—NOTES.

NOMINALISM IN MATHEMATICS.

A REVIEW by Prof. A. E. Taylor in No. 82 of MIND (p. 280) suggests some reflexions on nominalism in Mathematics. Prof. Taylor says: "The modern developments in mathematics are, rightly understood, the very reverse of a victory for any form of Nominalism. In Mathematics, Nominalism should mean the doctrine that the symbols with which we operate *are* the objects which we are studying, *e.g.*, that the associative and commutative laws of Addition and Multiplication are actually statements about the written or printed symbols + and ×. This is a view which has had its supporters, but it is not to them that we owe the great developments like Cantor's Theory of the Transfinite, or the reconstruction of the calculus on a sound logical basis."

Cantor[1] has expressly protested against the theory, advocated by Helmholtz and Kronecker in 1887, that the integer ordinal numbers are the signs we use in writing them down; but, strangely enough, he seems to have supported the view that real numbers are "signs to which certain properties are attributed".[2] It is quite possible to maintain that

[1] *Zur Lehre vom Transfiniten*, Halle, 1890, pp. 16-20.
[2] *Math. Ann.*, vol. xxi., 1883, pp. 589-590.

Cantor is not to be taken quite literally in this statement, and that what he really means is that new entities having the properties stated are to be postulated.

The question that Prof. Taylor suggests seems to me to be a very important one from a psychological point of view. It seems to be undoubtedly true that some mathematicians to whose efforts the structure of modern mathematics is mainly due had a very strong dislike to nominalism in mathematics. This was the case with Paul du Bois-Reymond. But, on the other hand, many men, such as Heine, Helmholtz, Kronecker, Thomae, Stolz, and Pringsheim, have expressly advocated nominalism in mathematics and yet have sometimes made very valuable contributions even to rather fundamental questions. It seems to be true that the really fundamental questions of mathematics have been successfully treated only by those few mathematicians who have little or no tendency towards nominalism; but, on the other hand, philosophers, with whom the tendency towards nominalism is not usually so general, have not been markedly successful in dealing with the principles of mathematics. A discussion would be helpful.

PHILIP E. B. JOURDAIN.

CORRIGENDA.

"Euler's Circles and Adjacent Space," MIND, No. 83, p. 410 *seq.*

On page 411, in line 4, for $\bar{S}$ i $\bar{P}$ read $\bar{S}$ i $\bar{P}$; in line 6, for Some $\bar{S}$ is $\bar{P}$ read Some $\bar{S}$ is P, and for Some S is not P read Some $\bar{S}$ is not $\bar{P}$; and in line 7, for $\bar{S}$ i $\bar{P}$ read $\bar{S}$ i $\bar{P}$. In the sixth line from the bottom of page 414, for $\bar{S}$ a P read $\bar{S}$ a $\bar{P}$.

OBITUARY.

We regret to have to record the death, at Lyons, on 16th July, in the seventy-fourth year of his age, of Prof. Alfred Fouillée, Officier de la Légion d'Honneur, Membre de l'Institut, Ancien Maître de Conférences à l'École Normale Supérieure. The works of this prolific and learned writer were well known to many English readers. His literary activity and the vigour of his thinking were maintained to the end of his long and distinguished career. Among his works may be mentioned *La Philosophie de Platon; La Philosophie de Socrate; La Liberté et le Déterminisme; Systèmes de Morale Contemporains; Le Moralisme de Kant et l'Amoralisme Contemporain; Morale des Idées-Forces; Psychologie des Idées-Forces, Esquisse Psychologique des Peuples Europ; Psychol du Peuple Français, L'Evolutionisme des Idées-Forces.*

PLEASE DO NOT REMOVE
CARDS OR SLIPS FROM THIS POCKET

SCARBOROUGH COLLEGE LIBRARY

B
1
M65
n.s.
v.21

Mind

NOT TO BE TAKEN FROM THE ROOM